

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF SOUTH CAROLINA
CHARLESTON DIVISION

SUZANNE Q. LITTLE, individually
and as Personal Representative of
the Estate of SAMUEL MARTIN
LITTLE, Deceased,
Plaintiffs,

CIVIL ACTION

VS.

FILE NO. 2:98-1879-23

BROWN & WILLIAMSON TOBACCO
CORPORATION individually and as
successor by merger to THE
AMERICAN TOBACCO COMPANY and
R.J. REYNOLDS TOBACCO COMPANY,
Defendants.

DEPOSITION OF
LACY K. FORD, JR., Ph.D.

March 24, 2000
9:20 a.m.

3500 SunTrust Plaza
303 Peachtree Street
Atlanta, Georgia

Alexander J. Gallo, CCR-B-1332, CRR

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LAWYER'S NOTES

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A. WILLIAM ROBERTS, JR. & ASSOCIATES

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2 .

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9

10 On behalf of Brown & Williamson Tobacco

11 Corporation:

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18 On behalf of R.J. Reynolds Tobacco Company:

19 PAUL D. KOETHE, Esq.

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25 .

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1 Deposition of Lacy K. Ford, Jr., Ph.D.

2 March 24, 2000

3 LACY K. FORD, JR., Ph.D.,

4 having been first duly sworn, was examined
5 and testified as follows:

6 MR. EVANS: Good morning,

7 Dr. Lacy. We met when I came in the door.

8 I am Jerry Evans representing the plaintiff
9 in this case. I am from Charleston, South
10 Carolina. It is good to see you this
11 morning.

12 I would like for counsel to
13 introduce themselves on the record, please.

14 MR. KOETHE: Paul Koethe with
15 Jones, Day representing R. J. Reynolds.

16 MR. SINGLETON: Shannon Singleton
17 with Jones, Day, also representing R. J.
18 Reynolds Tobacco.

19 MR. HASKINS: Stewart Haskins with
20 King & Spalding representing Brown &
21 Williamson.

22 MR. HOFFMAN: Bill Hoffman with
23 King & Spalding representing Brown &
24 Williamson; however, Mr. Haskins will be
25 representing Brown & Williamson at this

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1 deposition. I will be leaving in about 35
2 minutes or so and leaving the deposition to
3 him.

4 MR. EVANS: Dr. Ford, I would
5 like to have the court reporter mark a copy
6 of the Notice of Deposition Duces Tecum,
7 please, and, I apologize, I am going to ask
8 him to use your copy.

9 (Plaintiff's Exhibit-1 was marked
10 for identification.)

11 EXAMINATION

12 BY-MR. EVANS:

13 Q. Let me ask you, Dr. Ford, have
14 you seen this before this morning?

15 A. Yes, I have.

16 Q. Are you here today pursuant to
17 this notice?

18 A. Yes, I am.

19 Q. On Page 2 of this notice is a
20 page that is called Schedule A. Do you see
21 that?

22 A. Yes, I do.

23 Q. And it is a list of documents
24 that you were asked to bring to your
25 deposition this morning.

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1 Let me ask you, have you brought
2 any documents with you today?

3 A. Yes, I have.

4 MR. EVANS: Is counsel prepared
5 to turn over those documents at this time?

6 MR. KOETHE: We have, Jerry, a
7 number of things we can turn over, some of
8 which, if you want copies of, we will need
9 to get copied for you.

10 Q. (By Mr. Evans) Dr. Ford, counsel
11 has handed me a 15-page document entitled
12 Little Deposition List.

13 Can you describe for me what this
14 is?

15 A. This is a list drafted really to
16 the best of my ability which lists
17 specifically materials of various kinds that
18 I have relied on in forming my opinions in
19 this case.

20 And in some cases where the list
21 is more generic, I believe those are areas
22 in which I have provided copies, or you have
23 actual documents here. I don't have all of
24 the actual documents on this list here today,
25 but ones that I believe are not specifically

1 listed that, to the best of my ability, are
2 to say at this point are the ones I am
3 relying on for my testimony in this case are
4 what we have here.

5 Q. Are you saying that the ones that
6 you brought copies of are, from this list,
7 the ones that you are particularly relying on
8 for this case?

9 A. No, no, that is not what I am
10 saying.

11 I believe, if you will check this
12 list, for example, if you go down to entry
13 583 and 584, it says various North Carolina
14 newspaper articles, various South Carolina
15 newspaper articles. Where there is not
16 really a fairly specific thing listed, I
17 tried to provide the actual document there.

18 In other cases, these are all
19 items in the public domain. They are simply
20 listed here on this list rather than me
21 having actually brought them here today.

22 Q. Okay. Thank you.

23 MR. EVANS: I would like the
24 court reporter to mark this as Exhibit 2,
25 please.

1 (Plaintiff's Exhibit-2 was marked
2 for identification.)

3 Q. (By Mr. Evans) Dr. Ford, is that
4 a document responsive to Item 1 on Schedule
5 A, a list of all documents, journals,
6 articles, et cetera, relied on or referenced
7 by you in the formulation of each of your
8 opinions?

9 A. Yes. That is responsive to that
10 request.

11 Q. Are there any other documents you
12 have for me today that are in response to
13 Item 1 on Schedule A?

14 A. I don't believe so, no.

15 Q. Item 2 says, Documents which
16 counsel provided the deponent that pertain to
17 the subject matter of deponent's expected
18 testimony.

19 Do you have any documents that
20 would be responsive to Request No. 2?

21 A. I do not have those documents
22 with me. I can tell you what they are.

23 Q. Please do.

24 A. The documents provided by counsel
25 that would pertain to Section 2 or Request 2

1 would be the Amended Complaint in this case
2 and depositions of Martin Little; of Suzie
3 Little; and four additional depositions on
4 Mr. Little's sister; on attorney from
5 Charleston, Steven Schmutz; Lloyd Pearson; and
6 I believe another friend of the plaintiff's,
7 Dr. Arana. To the best of my recollection,
8 these are the only documents that were given
9 to me by counsel in this case. And I do
10 not have copies of those with me.

11 Q. That's okay. Thank you.

12 Dr. Ford, Item No. 3 says,
13 Documents which the deponent has specifically
14 reviewed in preparation for his testimony in
15 this case which relate to his testimony in
16 this case.

17 Now, other than the documents that
18 would be included in Item No. 1 or 2, are
19 there any additional documents that would fit
20 into Request No. 3?

21 A. Again, as I understand that
22 question, that's simply the materials I have
23 listed here in this deposition list and the
24 ones that are available here in my materials
25 that I brought today.

1 Item 3 and Item 1, there is a
2 lot of overlap there, as I understand them,
3 in terms of my testimony, at least.

4 Q. Are there any documents that you
5 have reviewed specifically in preparation for
6 this deposition today, again, other than the
7 items that form the basis of your opinion
8 and are described in No. 1?

9 A. In other words, in preparation for
10 the deposition as opposed to relying on in
11 forming my opinions?

12 Q. That is correct.

13 A. Well, other than looking at this
14 request and the expert report, no.

15 Q. Item No. 4 says, Documents
16 prepared by the deponent in connection with
17 his or her testimony in this case.

18 Now, I will ask you more
19 specifically about your expert report. So
20 excluding your expert report, are there
21 documents that you have prepared in
22 connection with your testimony in this case?

23 A. I haven't prepared any formal
24 documents in connection with my testimony in
25 this case. I did make a few written notes

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1 from the depositions that I read, which I
2 believe I have here with me, if you would
3 want to see those.

4 Q. Yes, I would. Are you prepared
5 to turn those over?

6 A. Yes. These are basically the
7 notes I took after reading some of the
8 depositions.

9 MR. EVANS: Thank you. I will
10 ask the court reporter to mark this as No.
11 3, please.

12 (Plaintiff's Exhibit-3 was marked
13 for identification.)

14 Q. (By Mr. Evans) Dr. Ford, if you
15 would, take a look at what we labeled as
16 Exhibit 3. That appears to be six pages of
17 notes.

18 Is that your handwriting, sir?

19 A. Yes, it is.

20 Q. I say six pages. It appears to
21 be six separate sheets, some of which are
22 written front and back.

23 A. Yes. It might be.

24 Q. Have I miscounted?

25 A. It might be seven.

1 Q. Seven. I can see from where you
2 are holding that it is, in fact, seven.

3 These are notes that you have
4 made while reviewing materials for this case;
5 is that correct?

6 A. These are notes that I made while
7 reading depositions of plaintiff's witnesses
8 in this case, yes.

9 Q. Returning to Schedule A, Item No.
10 5, it says Medical or scientific articles
11 that deponent presently anticipates referring
12 to his during direct testimony.

13 Do you have any documents in
14 response to that?

15 A. Well, as you doubtless know, I am
16 not a medical or scientific expert in this
17 case, and there may be some occasions
18 actually where in my own research, I have
19 been pointed to something that appeared in
20 something that might be classified as a
21 medical or scientific journal. But if that
22 is the case and it is anything I am
23 intending to rely on, it is listed here, to
24 the best of my ability, on this list. So I
25 have nothing to add to that deposition list.

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1 Q. When you say "listed here," you
2 are referring to what we marked as Exhibit
3 2?

4 A. Yes, what is titled the Little
5 Deposition List.

6 Q. Item 6 says, All correspondence
7 between defense counsel and deponent,
8 including billing records in connection with
9 this case.

10 Do you have any documents in
11 response to that?

12 A. The only correspondence I had with
13 counsel in this case are the billing records,
14 and I do have those this morning.

15 Q. Okay. If I could see those,
16 please.

17 A. There.

18 MR. EVANS: If I could have the
19 court reporter mark this as No. 4.

20 (Plaintiff's Exhibit-4 was marked
21 for identification.)

22 Q. (By Mr. Evans) Dr. Lacy, I will
23 show you what we marked as Exhibit 4 and ask
24 you to just describe that for me.

25 A. These are bills for fees and

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1 expenses involving my work in this case that
2 I have sent to defense counsel in order to
3 be paid and reimbursed.

4 Q. Are these bills that you prepared?

5 A. Yes, they are.

6 Q. Does this reflect up-to-date
7 billing for the work that you have done on
8 this case?

9 A. That reflects billing, the most
10 recent billing I filed, which would cover
11 through the end of February.

12 Q. Do you anticipate filing
13 additional invoices with defense counsel?

14 A. Well, I have done work in the
15 month of March, and at the end of the month,
16 I will submit a bill for that.

17 Q. Can you estimate for me today the
18 amount of work that you have done in the
19 month of March?

20 A. I believe it is about 15 hours.

21 Q. Item No. 7 on Schedule A, Dr.
22 Ford, says, List of deponents' prior
23 testimony in smoking and health litigation.

24 Do you have anything in response
25 to that?

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1 A. Yes, I do. This is a list of
2 my prior testimony, which includes -- and it
3 includes both deposition testimony and trial
4 testimony.

5 MR. EVANS: I'll ask the reporter
6 to mark this as No. 5, please.

7 (Plaintiff's Exhibit-5 was marked
8 for identification.)

9 Q. (By Mr. Evans) As I look at
10 this list, Dr. Ford, it appears that the
11 most recent testimony, excluding your
12 appearance here today, in tobacco litigation
13 would have been your trial testimony in the
14 Gilboy case; is that correct?

15 A. I believe that is correct, yes.

16 Q. Did you give deposition testimony
17 in Gilboy as well?

18 A. No. That was simply trial
19 testimony.

20 Q. Finally, are there any other
21 documents that you have brought with you
22 today that would be responsive in any way to
23 Schedule A?

24 A. No, I don't believe there are.

25 Q. Thank you. I wanted to get that

1 inventory of documents out of the way.

2 Now, let me make some more sort
3 of general introductory remarks. I know you
4 have been deposed before. We just talked
5 about that, but I do want to say that if at
6 any time you don't understand what I am
7 asking you, to please let me know. If I
8 don't hear from you otherwise, I will assume
9 that you have understood my question and are
10 answering it to the best of your ability.

11 A. I understand.

12 Q. If you need a break for any
13 reason whatsoever, please let me know and we
14 will be happy to accommodate you.

15 A. I will.

16 Q. Are you in good health as we sit
17 here today?

18 A. Yes, to the best of my knowledge,
19 I am.

20 Q. Any condition or medication or
21 anything that might impair your ability to
22 understand my questions or give answers
23 today?

24 A. No.

25 Q. Are you a smoker, Dr. Lacy?

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1 A. No, I am not.

2 Q. Have you ever been?

3 A. No, I have never been.

4 MR. EVANS: I would like the
5 court reporter to mark this as 6.

6 (Plaintiff's Exhibit-6 was marked
7 for identification.)

8 Q. (By Mr. Evans) Dr. Ford, could
9 you look at Exhibit 6.

10 Is this a current curriculum vitae
11 for you?

12 A. Yes. This looks like the most
13 recent one I prepared.

14 Q. How recently was this particular
15 CV prepared?

16 A. You know, I don't recall the
17 exact date. It looks like, just based on
18 some of the things that are on it, it must
19 have been -- it probably was prepared in
20 December or perhaps very early January.
21 December of 1999 or very early January of
22 2000.

23 Q. Under education on your CV, it
24 lists three degrees from the University of
25 South Carolina.

1 Have you had any other formal
2 education from any other institution?

3 A. Certainly not after high school,
4 no.

5 Q. That is what I meant. Thank you.
6 Your teaching career has been at
7 the University of South Carolina, except for
8 one year at the University of California in
9 Berkeley, is that correct?

10 A. That is correct, yes.

11 Q. You list under skills,
12 quantitative methods and Russian.

13 Could you describe for me what
14 you mean by "quantitative methods"?

15 A. As you may be aware, although
16 very slightly from graduate program to
17 graduate program, there is usually some sort
18 of language or method requirement that goes
19 along with receiving a Ph.D. In other
20 words, a lot of departments require either a
21 reading knowledge of two foreign languages or
22 their equivalent.

23 I chose to substitute for one of
24 my foreign languages in meeting my Ph.D. some
25 training in quantitative methods, at that

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1 time quantitative and computer methods. This
2 was in 1983, and computers were not used as
3 widely as they are now. And so there is some
4 specific training involved. And that is what
5 that refers to.

6 Q. Give me a little bit more of a
7 definition of what quantitative methods is
8 the study of.

9 A. Well, basically, at least in terms
10 of my training here during the graduate
11 program, it involved learning how to collect
12 data for quantitative analysis, learning some
13 basic techniques of quantitative analysis, and
14 learning to use the appropriate computer
15 programs to conduct that kind of quantitative
16 analysis.

17 Q. Are you currently teaching classes
18 at the University of South Carolina?

19 A. Yes, I am.

20 Q. What classes are you currently
21 teaching?

22 A. Can I ask for a clarification?
23 Do you mean what courses am I teaching this
24 semester?

25 Q. I do mean this semester.

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1 A. I am teaching two classes at the
2 University of South Carolina this semester.
3 The history of South Carolina since 1865.
4 It is 400 -- History 410, a 400 level
5 course. That is a course aimed at upper
6 level undergraduates.

7 I am also teaching a course that
8 we call the sections in the nation. That is
9 a history of the United States from 1828 to
10 1861. It is labeled History 403 at the
11 University of South Carolina, and it covers
12 the Jacksonian Period and the coming of the
13 Civil War. It too is, like the other
14 400-level course, aimed at upper level
15 undergraduates, so juniors and seniors.

16 Q. Have you ever taught a class that
17 was on the subject matter of public knowledge
18 or common knowledge about any topic?

19 A. Well, that is a difficult question
20 to answer in that certainly I haven't taught
21 a class that would have that in the title or
22 would be that exclusively. But, of course,
23 in many classes that I teach on issues of
24 public awareness, public knowledge come up
25 from time to time in relation to a variety

1 of questions and are taught. But it would
2 be not in a class of its own but under a
3 -- as something that comes up as part of
4 another class I would teach.

5 Q. In the classes that you described
6 that you are currently teaching this
7 semester, could you give me an example of
8 where you would talk to your students about
9 common knowledge or public knowledge?

10 A. Well, we haven't quite gotten to
11 this point yet this semester, but based on
12 what I have done in the past, yes, I think
13 I can give you -- just one example would be
14 on the public awareness laws in the American
15 south in the circumstances surrounding Abraham
16 Lincoln's election to the presidency in the
17 fall of 1860.

18 That is information that came into
19 the public domain about his election and his
20 planned action very much and how the public
21 received that information was a very crucial
22 issue. And I think that it would -- it might
23 not be the best example if I had more time
24 to think about it, but it would be one
25 example of when issues like the ones you are

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1 referring to comes up in courses that I
2 teach and probably will come up this semester
3 in a few weeks.

4 Q. If you don't mind, let me break
5 this down specifically. Would you cover the
6 awareness of, say, South Carolinians of the
7 fact that Lincoln was elected?

8 A. Yes.

9 Q. What sources would you go to in
10 talking about that, awareness of the fact
11 that Lincoln was elected?

12 A. The -- certainly probably the best
13 source for that and the source that I would
14 -- would be the public newspapers of that
15 era.

16 Q. Now, how about would you cover
17 the public's reaction to the election of
18 Lincoln?

19 A. Yes.

20 Q. What sources would you go to in
21 discerning that?

22 A. Well, again, I think that
23 historians don't tend to rely solely on one
24 source, but a variety of newspapers were
25 published in that era would be probably the

1 most important source. Election returns would
2 be certainly something to look at once you
3 know that the issues are framed around a
4 response to his election. Those election
5 turns could be had and through the newspapers
6 or through different other public documents
7 published by the state legislature after
8 elections are held. So those would be the
9 types of things I would look at.

10 Q How would the election returns
11 give you information on the public's reaction
12 to the election of Lincoln?

13 A Well, used in conjunction with the
14 newspaper information -- and perhaps I should
15 clarify that you have to use all of these
16 sources in context, in conjunction with one
17 another. You often know -- well, just to
18 give you a fairly specific example, in
19 campaigns for the South Carolina state
20 legislature in 1860, there were people who
21 took the position that if Abraham Lincoln
22 were elected and nothing but elected, then
23 the state should immediately consider seceding
24 from the union.

25 Other candidates said no, that

1 would not be an appropriate response to
2 Lincoln's election and instead a different
3 course of action should be taken.

4 And one can certainly gauge in
5 studying election returns how people in an
6 individual district or county responded to
7 those messages. And you put that in the
8 context, though, of how the local newspaper
9 in this county has been -- the information
10 they have been giving the public about
11 Lincoln's election and their reports about
12 his intentions.

13 Q. You said you certainly can gauge
14 in a particular locality people's reaction.
15 I believe that is what you said a moment
16 ago.

17 Again, particularly what sources
18 would you go to to gauge a public's
19 reaction?

20 A. Well, again, I think the sources
21 that I already mentioned. There was often
22 time -- there is certainly commentary in the
23 newspaper, not only news, but editorials.
24 People wrote into the newspaper and
25 responded. And then when you have an issue

1 defined as that one was, the vote often, I
2 think, is maybe not a perfect indicator, but
3 it gives you some indication of how people
4 were responding to the information that they
5 received.

6 Q. You have on your CV a list of
7 articles and essays. If I could just ask
8 you to refer to that, tell me if there are
9 any articles or essays listed here that deal
10 with the topic of the public's knowledge or
11 common knowledge of an event.

12 A. Well, again, I think I would have
13 to give an answer to that question similar
14 to the one I gave earlier. I don't believe
15 there was an article in there which focuses
16 centrally and specifically on the public's
17 knowledge of, awareness of, or response to a
18 particular event. But certainly embedded
19 within these essays are instances where being
20 able to evaluate that is important.

21 Q. Let me ask you to give me just
22 one example. Take any of these articles
23 that you wish and explain to me how that
24 evaluation of the public knowledge would have
25 played a part.

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1 A. Well, to at least some extent, it
2 would be true for a lot of them. Just to
3 pick one, go down to the fourth one down on
4 the list. Well, let's do something
5 differently.

6 In the book, the first book that
7 is listed there under publications, origin of
8 southern radicalism, there is certainly a
9 section in that book that deals with the
10 issue of what we were talking about, how
11 citizens of South Carolina responded to the
12 presidential campaign and their knowledge of
13 Lincoln's election in the fall of 1860.

14 That example I used before would
15 apply there. And then there was some
16 discussion in that of what their response was
17 based on the information that they had.

18 Q. So that is the same example you
19 had given me earlier, the same subject matter
20 regarding the election of Lincoln.

21 Can you give me any other
22 example, say, more recent than the election
23 of Lincoln where you have -- where one of
24 your articles or books would have included a
25 discussion of the public's knowledge?

1 A. By "more recent," do you mean
2 something I have written about more recently
3 or something that occurred later than 1860.

4 Q. I mean, something you have
5 written. But when I said "more recently," I
6 meant more recently than 1860, yes.

7 A. In probably a somewhat smaller way
8 than the first example, if you will go down
9 to, I believe it is, the fifth article
10 listed under articles, the personal journalist
11 social critic Ben Roberts in the early
12 Twentieth Century south. Writing of that
13 article certainly involved on my part some
14 analysis or some ability to analyze from
15 sources consulted the public information about
16 and response to new deal policies in actually
17 the great depression before the new deal.

18 Again, that article has a
19 different focus, but there are small sections
20 in there that would require me to do that
21 sort of analysis.

22 Q. What sources did you go to in
23 evaluating the public's knowledge of certain
24 new deal policies?

25 A. Again, in that particular case, it

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1 was newspapers. Mostly, not exclusively, but
2 mostly South Carolina newspapers. Also, some
3 information from magazines, as I recall.

4 Q. Did that include any analysis of
5 how widely read or received that information
6 was?

7 A. Well, it certainly included an
8 analysis of how widely publicized things were
9 in South Carolina or, in particular, among
10 people in -- well, in South Carolina.

11 Q. When you are discerning how widely
12 publicized something was, how would you go
13 about that? Would you start with determining
14 how many articles on a given topic were
15 published?

16 A. No, I don't think I would
17 approach it that way exactly. What I would
18 do is I would try to think about and
19 identify the potential sources of information
20 that the public has at its disposal. In
21 other words, what ways is information
22 presented to the public at this particular
23 time and place. And where is the public
24 likely to look for information on this
25 particular subject.

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1 And then once you identify those
2 sources, you consult with them and see if
3 they covered -- and I guess to some extent
4 too how prominently and regularly have they
5 covered the issue you question. Evaluate the
6 quality of the informations presented, how
7 thorough is the account, how detailed. Does
8 -- is the information that is presented to
9 the public consistent with other information
10 that you are aware of, consistent with the
11 information that is given to the public in
12 other times and places about that event.

13 All of those things, I think, go
14 into evaluating public information.

15 Q. Does that include an evaluation of
16 any public reaction to that information?

17 A. Yes, it does. I mean, you have
18 to -- certainly -- well, it depends on the
19 particular question you are asking, but
20 sometimes you are just sort of aware of the
21 information, what information reached the
22 public. But certainly if there is a public
23 response to that information, you can
24 consider that in conjunction as well.

25 It is -- yes. It is -- so in

1 some instances it clearly does.

2 (Plaintiff's Exhibit-7 was marked
3 for identification.)

4 Q. (By Mr. Evans) Dr. Ford, I asked
5 the court reporter to mark as Exhibit 7 a
6 report prepared by you in this case.

7 First of all, let me ask you if,
8 in fact, Exhibit 7 is the report you
9 prepared for this case.

10 A. Yes, it appears to be a copy of
11 the report.

12 Q. There is a cover sheet which has
13 your name on it and says, To satisfy his
14 obligations under local rule 26.90b for
15 disclosing Lacy Ford, Ph.D., R. J. Reynolds
16 submits the expert report prepared by Dr.
17 Ford himself for the Little case.

18 Let me ask you if, in fact, you
19 prepared this report yourself?

20 A. Except for that cover sheet, I
21 did not prepare that cover sheet, yes.

22 Q. So your report consists of Pages
23 2, 3, and 4 of what we marked as Exhibit 7,
24 correct?

25 A. Yes. Just glancing at it, that

1 seems to be the case.

2 Q. Did you draft the language used
3 in this report?

4 A. Yes, I did.

5 Q. Is this language that you have
6 used in other expert reports in other cases
7 you testified in?

8 A. It is similar to language.

9 Q. Similar to. But did you --

10 A. The form is. Of course, the
11 content is different, but the form of the
12 presentation is very similar.

13 Q. But the content is language you
14 prepared specifically for this case, is that
15 correct?

16 A. Yes, that is correct.

17 Q. After identifying yourself as a
18 historian, the third sentence of this report
19 says, I expect to testify about the history
20 of tobacco and tobacco use in the United
21 States.

22 Have I read that correctly?

23 A. Yes.

24 Q. Will you also be talking about
25 the, more specifically, the history of the

1 cigarette in the United States?

2 A. Certainly I should probably say up
3 front that I have not discussed the specific
4 context of -- content of direct testimony,
5 but certainly the history of the cigarette
6 would be something that I have reviewed and,
7 I believe, would be qualified to testify
8 about, yes.

9 Q. Approximately when was the
10 cigarette, as we know it today, available in
11 the United States?

12 MR. HOFFMAN: I am going to
13 object to the form of the question. I think
14 as "we know it today" is vague and
15 ambiguous.

16 Q. (By Mr. Evans) If you understand
17 my question, I will ask you to answer it.

18 A. I will ask you to clarify what
19 you mean by "as we know it today."

20 Q. Can you tell me when a cigarette,
21 as a commercially packaged tobacco vehicle
22 became available widely in the United States?

23 A. Well, I mean, I think I can
24 answer that question in a couple of parts.
25 Cigarettes in one form or another were

1 available well before the Civil War. And
2 some of those were packaged, although, to my
3 knowledge, some of them were not.

4 During the 1880s, there was a
5 shift in the way cigarettes were produced to
6 being mostly produced by hand to being more
7 heavily produced by machines and packaged in
8 a way that we might sort of recognize as
9 similar to cigarette packages in the 1960s.
10 Not -- of course, there would be great
11 changes of packaging over a period of time,
12 but it was really in the 1880s that the mass
13 production of large numbers of cigarettes
14 packaged for widespread distribution and sale
15 reaches a sort of critical mass or begins to
16 develop into a significant national business.

17 And certainly by the early 1890s
18 and the early first two decades, the
19 Twentieth Century, the product of cigarettes
20 was widely marketed and widely consumed in
21 the United States. But I certainly want to
22 make it clear that there were cigarettes
23 available before this process.

24 Q. Do you know who the leading
25 commercial manufacturers of cigarettes was in,

1 say, 1900?

2 A. In 1900, the American Tobacco
3 Company, which was the Duke family's
4 operation, was, I believe, the leading
5 commercial producer of cigarettes.

6 Q. Turning to the third paragraph of
7 your expert report, it says, I also expect
8 to testify that, throughout this century,
9 information that cigarette smoking could be
10 hazardous to health, that it could lead to
11 serious injury, including death, and that,
12 for some smokers, it could be difficult to
13 quit was widely disseminated to the general
14 public and was common knowledge.

15 Now, first of all, have I read
16 that correctly?

17 A. Yes, I believe you have.

18 Q. At this time, and in the context
19 of this sentence, would you give me a
20 definition of common knowledge?

21 A. In the definition of common
22 knowledge here is that information addressing
23 the fact that cigarette smoking was harmful
24 or potentially harmful or hazardous to health
25 was information that was widely disseminated

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1 and broadly shared in the public domain in
2 the early, the very early part of this
3 century.

4 Q. The next sentence goes on to talk
5 about ways that it was disseminated, and you
6 have listed several, educational courses in
7 the schools; activities; educational campaigns
8 and publications of private, health, civic
9 and religious organizations; books and reports
10 in newspapers and magazines and other media
11 and later on television; activities and
12 official literature of state and national
13 governmental bodies; and various other
14 sources.

15 Have I read that correctly?

16 A. Yes, you have.

17 Q. Can you describe for me your
18 research into educational courses in the
19 schools disseminating information on cigarette
20 smoking?

21 A. Yes, I think I can. That process
22 would, of course, begin with identifying what
23 the sort of state education requirements
24 were, generally, and particularly with regard
25 to health education. And then after

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15 Q. Would you go a level deeper and
16 try to determine if, in fact, material that
17 was in a textbook was actually presented to
18 students in the classroom?

19 A. While there is certainly evidence
20 from a variety of sources, that evidence was
21 presented in the classroom. It's certainly
22 not possible to be so specific as to say
23 this was presented in this classroom on a
24 particular time. That certainly is not
25 possible.

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1 But what is possible is to know
2 what the requirements were, to know what
3 sources -- what information was available,
4 what teachers were instructed to do, the fact
5 that teachers were supervised and
6 certification was in question as they did
7 that. And actually evidence that you do
8 encounter where people say later in response
9 to newspaper interviews, well, of course, we
10 were taught this in school years ago.
11 Clearly, it was a message that was widely
12 disseminated.

13 Q. You began your answer by saying,
14 "While there is some evidence of what was
15 actually taught to the students," is that the
16 sort of things you were then describing in
17 the latter part of your answer, or did --

18 A. I didn't understand. I am sorry.
19 I didn't understand the question.

20 Q. Well, can you give me an example
21 of the sort of evidence that would indicate
22 that particular material in a textbook was
23 taught to the students.

24 A. Well, certainly there was evidence
25 from the earliest time that people are

1 surveyed or discussed these issues that they
2 are receiving information. And often the
3 kind of information that they discuss is the
4 very type of information that was being
5 presented in the school textbooks.

6 It is, of course, less common for
7 -- you know, to go to a specific individual
8 and say they were taught this; but it is
9 very clear that this instruction was going on
10 in classrooms throughout the country and
11 including South Carolina, certainly from the
12 1920s forward and in some cases even earlier.
13 And it was required the textbooks have very
14 ample material in this. From the early
15 going, there are excellent materials prepared
16 by state education departments and other
17 groups for use on the smoking and health
18 issues in the classroom.

19 So certainly this information was
20 available and widely disseminated, to the
21 best of my ability, to ascertain that.

22 Q. Would you include someone's
23 comments that, yes, I remember hearing that
24 in school -- you referenced that earlier --
25 would you include that comment as part of

1 the body of evidence to suggest that material
2 was taught?

3 A. That would be part of the body of
4 evidence. It might be a small part, but
5 that would be part of the body of evidence.

6 Q. Let me skip down to the last of
7 the various sources that you have listed in
8 this sentence. It says activities and
9 official literature of state and national
10 governmental bodies.

11 Can you describe for me the
12 examples of the literature of state and
13 national governmental bodies that you
14 researched in connection with this case?

15 A. Well, there will probably be some
16 overlap there between state education
17 departments, things they produced for school
18 instruction. Public health departments,
19 certainly, produce literature on this subject
20 as well.

21 Q. What sort of literature?

22 A. A good example of that would be
23 the state of Florida published a journal
24 called Public Health Notes that was very
25 broadly disseminated in the medical and

1 health community in Florida beginning in the
2 early part of this century that would, with
3 some regularity, discuss smoking and health
4 issues.

5 Q. How did they go about
6 disseminating it or distributing it?

7 A. I believe in that particular case
8 they sent -- it was a state-wide publication
9 that was sent to all county boards of public
10 health and to all doctors and I believe to
11 schools and other public libraries, and it
12 may have been available to others for
13 purchase and subscription, although I am not
14 sure about that.

15 Yes, I would add that, in the
16 early part of the 20th century, county boards
17 of health were probably a more important
18 source of information about medical matters
19 than we might perceive them to be today in
20 the sort of absence of the large number of
21 doctors in the concept of a personal family
22 doctor in, say, 1910 versus in 1990.

23 And so they were -- I am sure
24 that they engaged in this kind of activity
25 even today, but it was probably even more

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1 central in the early part of this century.

2 Q. What evidence do you have that
3 that played a more central role in the early
4 part of the century than it does now?

5 A. Well, I think that there were, in
6 1910, perhaps fewer other organizations. You
7 have a number of public health organizations
8 now that engage in extensive fund raising to
9 get their message out, the American Cancer
10 Society, the American Heart Association. And
11 while certainly, at least in South Carolina,
12 the state public health officials are always
13 putting out information about health. It is
14 not that they stopped doing it, but it stood
15 out more clearly, was more in the early part
16 of the century than it does today.

17 Q. Well, there were certainly fewer
18 voices in the earlier part of the century;
19 is that correct?

20 MR. KOETHE: Object. I am going
21 to object to the form of the question.

22 Q. (By Mr. Evans) You described
23 there being more avenues of information now,
24 I believe.

25 A. Well, I would probably say that

1 there are more public health entities as
2 opposed to the state --

3 Q. Okay.

4 A. Certainly there were public health
5 entities other than state boards of health
6 even early in the century, and there were
7 private organizations, as there are in later
8 periods, very early in the Twentieth Century
9 talking about the health hazards of smoking.
10 The National Anti-Cigarette League was very
11 active and was probably pretty close to being
12 a counterpart in some ways to the activities
13 of modern public health, of privately-funded
14 health organizations.

15 Q. I am asking you to give me some
16 evidence of why you said that the county
17 board of health or the county organizations
18 would have played a more important role
19 earlier in the century.

20 A. Well, I think I am relying to a
21 degree on that and to my underlying expertise
22 as a historian on my knowledge of the early
23 Twentieth Century, the progressive era. And
24 particularly in the south in those eras and
25 people who have written about health-related

1 questions have maintained -- have talked
2 about the level of activity and the
3 centrality of county boards of health to
4 health services and information in that era.

5 And I think that that sort of is
6 a generally accepted proposition in what we
7 call the historiography of the literature,
8 historical literature written about the early
9 Twentieth Century.

10 Q. Can you cite any sort of text in
11 your general expertise as a historian that
12 would back you up on that?

13 A. There is a book about -- called
14 The History of Neglect about health care
15 among textile workers in the south that I
16 think would be consistent with the position I
17 have taken here.

18 There are sections in a general
19 survey in a book by William Link on southern
20 progressivism. The exact title of that
21 escapes me at the moment, but it certainly
22 has those two words in it. You wouldn't
23 miss it if you looked it up. He discusses
24 health issues at that period of time and
25 also makes that point.

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1 And, frankly, my own sort of
2 primary source of research in matters, other
3 than public awareness, the health hazards of
4 smoking, also tend to confirm the proposition
5 of the centrality of state and county boards
6 of health in the early Twentieth Century.

7 Q. In the sentence we have been
8 discussing that lists various means of
9 disseminating information, you conclude by
10 saying "various other sources." I would just
11 like to ask you if you can for me today
12 name other sources other than the ones you
13 listed there.

14 A. I certainly tried, in making this
15 out, to list things specifically if I
16 possibly could. And I included that last
17 phrase just to make sure that if there was
18 something that, you know, I -- I don't have
19 such a high opinion of my recollection, and
20 I can absolutely guarantee I named everything
21 else specifically.

22 So if there is something I
23 reviewed that I am relying on that doesn't
24 fall into one of those categories that covers
25 it. I don't know that I can pinpoint a

1 specific example right off the top of my
2 head.

3 Q. Well, let me suggest one other
4 source, Dr. Ford. What about cigarette
5 manufacturers? Would that belong in that
6 sentence anywhere?

7 A. Well, as I -- let me ask you to
8 clarify that. In what way do you mean about
9 cigarette manufacturers in that sentence?

10 Q. Well, taking the language of your
11 paragraph, the first sentence, "information
12 that cigarette smoking could be hazardous to
13 health, that could lead to serious injury,
14 including death, and that for some smokers it
15 could be difficult to quit and was widely
16 disseminated to the general public and was
17 common knowledge."

18 Then after that, you listed a
19 variety of means through which that
20 information was disseminated.

21 Would you include cigarette
22 manufacturers as one of the sources of that
23 information?

24 A. Well, there was certainly
25 information presented in the form of

1 statements and comments from cigarette
2 manufacturers that reached the public through
3 these sources. And certainly I reviewed that
4 and took that into consideration in forming
5 my opinion. And there may have been -- I
6 am trying to think.

7 There may have been an occasional
8 publication in the form of a pamphlet or
9 something that was distributed by cigarette
10 manufacturers that came into the public
11 domain, and I had evidence was in the public
12 domain, that I have looked at; but I
13 certainly have not -- all of the information,
14 that I have reviewed is information that came
15 into the public domain.

16 And overwhelmingly, I think it
17 came into the public domain through the
18 category of sources that I have listed here.

19 Q. Well, I note that you do
20 specifically say the activities, educational
21 campaigns and publications of private, health,
22 civic and religious organizations.

23 Is there any reason you did not
24 include the pamphlets you described a moment
25 ago from cigarette manufacturers?

1 A. Okay. Well, I should probably
2 clarify. There may be a slight
3 misunderstanding, and it could, I suppose,
4 grow out of my wording of this. Again, I
5 looked at the publications, information that
6 came into the public domain from private
7 health organizations, civic groups, religious
8 organizations, but by looking at information
9 that was in the public domain. I have not
10 undertaken to make a systemic examination of
11 all material that may have been prepared that
12 I didn't encounter in examining the public
13 domain.

14 And the same really would apply
15 to tobacco manufacturers as well.
16 Information from manufacturers or manufacturing
17 companies as a source that came into the
18 public domain, I certainly looked at, read,
19 and paid attention to.

20 As I said, there may have been an
21 odd pamphlet or two that fell into that, but
22 I certainly didn't ask -- I didn't ask
23 tobacco manufacturers for information they
24 prepared, and I didn't ask the American
25 Cancer Society that. I tried to take what

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1 came into the public domain and examined it.
2 And certainly there was information from
3 tobacco manufacturers that came into the
4 public domain through this variety of
5 sources, overwhelmingly or primarily, and I
6 reviewed that.

7 Q. So you did review items that went
8 into the public domain generated from tobacco
9 manufacturers; is that correct?

10 A. Yes, or statements made by
11 representatives of the industry and that sort
12 of thing as they appeared in these sources.

13 Q. I would like to turn to the next
14 page of your disclosure, the paragraph which
15 begins actually at the bottom of the previous
16 page and then continues on, at about five
17 lines down. You state, Since 1964, the
18 issue of smoking and health has continued to
19 receive extensive coverage in a variety of
20 public forums. All levels of government have
21 engaged in increasing efforts to regulate the
22 marketing, sale, and use of tobacco products.

23 And then you conclude that
24 paragraph by saying, In addition, government
25 and private organizations continued and

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1 intensified their educational and regulatory
2 efforts.

3 Can you discern from the
4 information you got from government and
5 private organizations why they were continuing
6 and intensifying their educational regulatory
7 efforts concerning tobacco?

8 A. Well, yes. I think certainly to
9 some extent I can. The report of the
10 Surgeon General's advisory committee, which is
11 referenced in the previous section, made a
12 report pointing out what it believed at that
13 point were the health hazards or health risks
14 of smoking, and then urged, in conjunction
15 with that report, that the nation take what
16 it termed appropriate remedial action.

17 There ensued a very active public
18 and ultimately political debate over exactly
19 what sort of remedial action or what sort of
20 action should be taken by the government.

21 And one of the things that
22 emerged from that public discussion and that
23 political debate and ultimately the split
24 decision -- of course, political decisions
25 are ongoing. They are being remade all the

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1 time. But the political decision was that
2 education, continuing to inform people of the
3 health hazards of smoking, and that findings
4 of the Surgeon General's report and any new
5 studies that are done publicizing those was
6 really the best approach to take to address
7 this public health problem.

8 And I certainly think,
9 particularly in the years following that
10 report, that was a big impetus to this
11 continued and intensified activity.

12 Q. Well, have you seen any indication
13 that government or private organizations have
14 concluded that it is no longer necessary to
15 continue their educational efforts?

16 MR. KOETHE: Could you read that
17 question back for me, please?

18 (The record was read by the
19 reporter.)

20 THE WITNESS: Well, certainly
21 educational efforts are ongoing. I have
22 certainly seen statements made by people in
23 public health organizations and government
24 officials saying that the information on
25 health hazards of smoking is widely

1 available, and everybody has access to it.
2 But that is not accompanied by a statement
3 that there should be cessation in educational
4 efforts.

5 So I guess the answer is I don't
6 recall anybody recommending -- and there has
7 been discussion that at some point -- you
8 know, how much you spend on education versus
9 other things are debatable issues. But I
10 don't ever recall anybody taking the position
11 that continued education wasn't advisable.
12 No, I don't think so.

13 Q. (By Mr. Evans) Well, Dr. Ford,
14 you are opining in this report that
15 information that cigarette smoking could be
16 hazardous to health has been widely
17 disseminated to the general public and is
18 common knowledge, correct?

19 A. That is correct.

20 Q. In your opinion, are any more
21 governmental efforts to educate necessary?

22 A. I guess, and I am not sure now
23 whether you are -- that may be a question
24 that falls outside my area of expertise. It
25 seems to me that an opinion that I would

1 have in the year 2000 about what the
2 government should be doing is essentially a
3 personal opinion. And if you want, if it is
4 appropriate for me to offer a personal
5 opinion, I guess I would be happy to do so,
6 but I don't know that I would set myself up
7 as an expert on what ought to happen in
8 terms of education.

9 Q. Well, let me ask you this: In
10 connection with the language you have used
11 that information that cigarette smoking could
12 be hazardous to health has been widely
13 disseminated to the general public and was
14 common knowledge, would it be your opinion
15 that it is adequately disseminated to the
16 general public?

17 A. Yes. I think the public is now
18 and has been for many decades well informed
19 about the health risks of smoking.

20 Q. Well, let me extend that then to
21 would you regard continued governmental
22 efforts to educate the public as redundant?

23 A. Well, I think that there is
24 certainly a way in which ongoing efforts to
25 inform -- to give the public information

1 about the health hazards of smoking is, in
2 fact, redundant. You are telling them over
3 and over again something that they already
4 know and know well.

5 That doesn't mean that from some
6 perspective, those efforts are not useful.
7 Certainly public awareness and common
8 knowledge are cumulative. They are passed
9 down to some extent from generation to
10 generation; but, nonetheless, I think it
11 remains important that there is evidence that
12 has been accumulated over a long period of
13 time and is well known and would be passed
14 on to future generations through school and
15 education programs. So you would certainly
16 want to continue doing those.

17 So, I mean, again, I think in
18 many cases the public is being told over and
19 over again something that it already knows;
20 but I think that it can, in fact, be
21 valuable to tell them that.

22 Q. So you are not advocating that
23 any of these sources of information stop
24 their efforts to educate on smoking and
25 health; is that accurate?

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1 A. Again, without setting myself up
2 as a public policy expert in this area,
3 somebody who has to make decisions about what
4 the best allocation of limited resources are,
5 I would say, again, that ongoing educational
6 efforts are, in my personal opinion, sound
7 public policy.

8 Q. Continuing on to the next
9 paragraph of your statement which lists some
10 of the bases for your opinions, you include
11 polling and survey data, media coverage,
12 cigarette smoking prevalence, popular culture,
13 and public and governmental reaction.

14 Q. How does cigarette smoking
15 prevalence enter into your opinions on how
16 widely disseminated the information is?

17 A. Well, certainly there was a good
18 bit of information out there in the public
19 domain about cigarette smoking prevalence.
20 And it was discussed in the public media,
21 especially at times -- the number of people
22 who were former smokers who had quit at some
23 time were cited in the public media as
24 examples that the impact of some of this
25 health information and the information about

1 the health risk was having on the general
2 public.

3 And certainly I considered that as
4 one kind of evidence during this period. I
5 don't consider any kind of evidence in a
6 vacuum, but I think that it does -- it is
7 fairly convincing when you have a large body
8 of evidence about the health risks of smoking
9 emerging and constantly being enhanced and at
10 the same time a sort of gradual diminution
11 in the portions of Americans who smoke. That
12 is something that has to be considered as
13 part of the larger position.

14 Q. Would a leveling off of smoking
15 prevalence or a rise in smoking prevalence,
16 and I am just asking you hypothetically,
17 would either of those have formed your
18 opinion on the dissemination of information?

19 A. There are many factors that go
20 into individual decisions about whether or
21 not to smoke. And certainly I think that
22 people have this information about the health
23 hazards; and many people, a declining portion
24 of people, but many people, continue to make
25 that decision to smoke in spite of the

1 information that is available to them.

2 So, again, I think I would claim
3 that I can't really say why any individual
4 makes a smoking decision; but I think that
5 it is significant that there has been a
6 downward trend in the proportion of people
7 who smoke, you know, since 1950.

8 I think there was another part of
9 your question, when you said if it had been
10 something else, you know, that is essentially
11 counterfactual. There may very -- that is
12 not what happened, at least to the best of
13 my ability to obtain information.

14 So it would seem to me it would
15 be idle speculation to say that -- based on
16 what did happen, I see this as, within the
17 larger body of evidence, something of a very
18 consistent practice.

19 Q. In your report, you say, and I am
20 reading from approximately the middle of this
21 paragraph, that you expect to testify that,
22 quote, the ordinary consumer with knowledge
23 common to the community during the period of
24 Samuel Martin Little's life would have been
25 aware that cigarette smoking could be

1 hazardous to health, et cetera.

2 What, to your recollection, was
3 the period of Samuel Martin Little's life?

4 A. Well, I believe I had notes on
5 that that gave -- I think he was born in
6 1945 and died within the last 12 months or
7 so.

8 Q. And the language the ordinary
9 consumer had knowledge common to the
10 community, did you choose that language, or
11 did someone else draft that language?

12 A. I used that language in this
13 report. I believe that that is a rough
14 approximation of language that I have read in
15 regards to a sort of legal standard which I
16 don't claim to be an expert on. So my use
17 of that knowledge was probably shaped by that
18 familiarity; but, yes, this is -- I wrote
19 this.

20 This is my language on the
21 typical or the average consumer, consumer
22 without any special knowledge, but especially
23 with knowledge available, a common knowledge
24 widely shared throughout this community is
25 what I intended to convey there, and that

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1 seems like a clear expression of it.

2 Q. At the bottom of this second page
3 of your report, you list a number of
4 national and regional newspapers and also
5 some magazines.

6 Do you see that?

7 A. Yes, I do.

8 Q. Are articles or stories that come
9 from those newspapers or magazines, are those
10 among the things that are reflected on what
11 we earlier marked as Exhibit 2, a list of
12 publications?

13 A. Yes, they are.

14 Q. Do these include any discussions
15 of the public's knowledge or awareness of
16 cigarette issues, or are these stories
17 reporting on health aspects of cigarette use?
18 First of all, do you understand the
19 distinction I am making in that question?

20 A. I am not sure I do.

21 Q. Let's take two types of stories,
22 a story that reports that tests have shown
23 cigarette smoking is hazardous to your health
24 or this governmental agency has reported
25 tests showing that cigarette smoking is

1 hazardous to your health. Let me call this
2 one type of information.

3 The other type of story I am
4 talking about is a story that reports that
5 the public is well informed of the health
6 risks of cigarette smoking.

7 Now, are you talking about, and
8 are these articles and newspapers you are
9 citing, are they stories that fall in my
10 first category or stories that fall in my
11 second category?

12 A. They are stories that fall into
13 both of those categories, as I understand
14 your description of them.

15 Q. Can you give me an example of my
16 second category, a story that is reporting on
17 the public awareness?

18 A. Oh, yes, I can.

19 Q. If you could, do that, please.

20 A. Probably the best way to do it
21 would be generically. There were several
22 types of that story that fall into that
23 category. Public opinion polling responding
24 to that question was pretty regularly
25 reported in newspapers as well as commentary

1 on that polling data. And those stories
2 appear with some regularity.

3 There are sort of interview
4 stories, you know, newspaper reporters
5 interviewing people in the street,
6 individuals, doctors, you know, smokers, as
7 there are major newspaper stories that appear
8 concerning the health risks of smoking.
9 People would go out and talk to people and
10 at least get a response on the people, and
11 those are included in the reports and are
12 included in editorial opinions about how
13 information was coming to the public, how
14 valuable it would be, and that was in those
15 newspapers that I looked at.

16 And there would be another
17 category of, not simply editorial opinion,
18 but columnists, specialty columnists, advice
19 columnists, political reporters, people who --
20 syndicated columnists who wrote analyzing
21 public response to various issues, not just
22 this one, but all kinds of issues that
23 address this question from time to time.
24 And those pieces of information, those
25 articles would be included in what I reviewed

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1 and from the sources indicated here as well,
2 yes.

3 MR. EVANS: It is about 10:30.
4 I would like to take about a five-minute
5 break.

6 MR. KOETHE: Sure.
7 (A recess was taken.)

8 Q. (By Mr. Evans) We are back on
9 the record, if everyone is ready.

10 Dr. Ford, would you say currently
11 that there is any controversy over the health
12 effects of cigarette smoking?

13 MR. KOETHE: Object to the form.

14 THE WITNESS: I am not a medical
15 or scientific person. I don't think I would
16 really be qualified to answer that.

17 Q. (By Mr. Evans) Is there still
18 public debate over the health effects of
19 smoking?

20 A. There are very serious and
21 significant health risks associated with
22 smoking, and those are well known. There
23 may be -- there are specific issues related
24 to specific diseases or things that do seem
25 to be or does seem to be difference of

1 opinion as discussed in the public press from
2 time to time.

3 Q. You provided us with some invoices
4 here which show a billing rate of \$100 an
5 hour.

6 Has that been your billing rate
7 since you have been working on tobacco cases?

8 A. Yes, that is correct, it has.

9 Q. You provided the number of hours
10 you spent working on this case.

11 Would the documents you provided
12 that we marked as Exhibit 4, would the
13 addition of the information you gave me on
14 your hours in March, would that reflect the
15 total amount of time that you dedicated to
16 this case?

17 A. Would you repeat the question just
18 to make sure?

19 Q. Sure. The documents we marked as
20 Exhibit 4, which are your invoices, plus the
21 information you gave me about your hours for
22 the month of March, would that reflect your
23 total time commitment to this case?

24 A. I certainly believe that it does,
25 yes.

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1 Q. Can you give me any estimate of
2 the amount of time, say, during 1999 that
3 you spent working on tobacco and health
4 litigation, because I see you have at least
5 a couple of examples of trial testimony here?

6 A. 1999, I believe, was the busiest
7 year in terms of my work in tobacco
8 litigation, and I probably spent something
9 like between 300 and 350 hours, I believe,
10 in 1999 working on tobacco litigation related
11 issues.

12 Q. That was billed at a hundred
13 dollars an hour?

14 A. That was billed at a hundred
15 dollars an hour, yes.

16 Q. Has that in all cases been in
17 connection with your work with Jones, Day?

18 A. All of that work done in 1999 was
19 with Jones, Day, yes.

20 Q. Have you ever been retained by
21 any other law firm in connection with smoking
22 and health?

23 A. Yes, I have.

24 Q. Who would that be?

25 A. In the --

1 Q. If you want to look at the list
2 of cases to refresh your memory --

3 A. Actually, this initial case here,
4 Clark versus R. J. Reynolds, I was, in fact,
5 designated as an expert by Jones, Day on
6 behalf of R. J. Reynolds in that case. And
7 my recollection -- this is all beyond my
8 area of expertise, but for some reason
9 Reynolds was dropped out or was dismissed
10 from that case and Liggett became the
11 defendant, and they had a different law firm,
12 Latham and Watkins, which had a New York
13 office. And even though I had begun working
14 and had done work on Clark, at the request
15 -- in consulting, at the request of Jones,
16 Day, when they were no longer involved but
17 yet the case was fairly far along towards
18 trial, I continued upon agreement, I agreed
19 to it, to continue with the new law firm
20 that was in charge of the defense in that
21 case.

22 Q. Other than that instance, has all
23 your involvement in the tobacco litigation
24 been in connection with R. J. Reynolds?

25 A. Again, I think currently I have

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1 been disclosed as an expert in a case where
2 Brown & Williamson is the principal defendant
3 and I believe the King & Spalding law firm
4 is representing Brown & Williamson in that
5 regard in that case.

6 It is a case involving an
7 individual, individual plaintiff in
8 Jacksonville, Florida, where I have done a
9 tremendous amount of research. So I agreed
10 on that basis to undertake to consult with
11 them on that case. And I believe that I
12 have been disclosed as a possible witness in
13 that case. I certainly prepared a
14 disclosure.

15 Q. But you have not given any
16 testimony in that case yet?

17 A. I have not given any testimony in
18 that case.

19 Q. Of all of the cases listed there,
20 was it in connection with R. J. Reynolds,
21 with the understanding that, in the first
22 case, you later became involved with Liggett?

23 A. Yes. That is correct. There may
24 have been codefendants in some of these
25 cases, but my involvement was as a consultant

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1 and later witness in conjunction with the
2 Jones, Day law firm representing R. J.
3 Reynolds.

4 Q. Have you worked as a consultant
5 in cases for which you never gave any
6 deposition or trial testimony?

7 A. Yes, I have.

8 Q. Can you tell me what those cases
9 were?

10 A. Yes. There were the Keegan case
11 in Jacksonville, Florida; the Ball case in
12 West Virginia; the Wagner case in
13 Jacksonville, Florida; the Whipple case in
14 Jacksonville, Florida -- all of which are
15 individual cases; the Montgomery case in the
16 Washington, D.C. jurisdiction; and the Akeamit
17 case, which is a class action case in South
18 Carolina; are all cases in which I have
19 consulted with Jones, Day but not given any,
20 at this point, either depositions or trial
21 testimony.

22 Q. Did you include your work on
23 those cases when you gave me an estimate of
24 about 350 hours for the year 1999?

25 A. Yes, yes. That was all of the

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1 work I did in 1999.

2 Q. And I believe you described 1999
3 as probably your busiest year in terms of --

4 A. That's right.

5 Q. -- expert consulting?

6 A. That's right. In terms of the
7 amount of time spent, certainly that was the
8 case.

9 Q. When were you first approached to
10 give testimony in a smoking and health case?

11 A. It was late spring or early
12 summer of 1995. I was contacted by a lawyer
13 with the Jones, Day law firm and then asked
14 if I had any interest in undertaking research
15 into this issue. I don't recall the exact
16 date, but it was May, around May of 1995,
17 approximately.

18 Q. Was that specifically in
19 connection with the Carter case?

20 A. I have not been -- I don't
21 recognize the Carter case.

22 Q. I may be using the wrong name.
23 I am sorry. The first case that is listed
24 there.

25 A. The Clark case.

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1 Q. Clark.

2 A. No, it was not. In fact, I am
3 not sure that the initial case, the initial
4 contact, was related to a specific case.

5 Q. Okay.

6 A. It was simply whether I would be
7 interested in undertaking work on this
8 subject.

9 Q. Do you have any idea why they
10 approached you in particular to do work on
11 this topic?

12 A. My recollection is that I had
13 been recommended to them by other historians
14 in the profession that I knew who thought I
15 would be well qualified to undertake the kind
16 of research and the type of project that
17 they were interested in having done. There
18 may have been other reasons, but I think
19 that is my recollection of -- when I asked
20 essentially that same question, that was the
21 answer.

22 Q. Previous to that had you done any
23 research on tobacco issues?

24 A. Yes, I had. Tobacco was one of
25 my -- one specialty I have is I am a

1 historian of the south, and tobacco has had
2 a significant role in the history of that
3 region, indeed the history of the entire
4 United States from the colonial times down to
5 the present and are changing. And, yes, I
6 had hooked into a number of tobacco related
7 issues in my own research prior to being
8 contacted. And that general background could
9 conceivably have been a reason that I was
10 contacted. I don't recall whether that was
11 indicated to me or not.

12 Q. Do you recall if they mentioned
13 to you at that time that they were familiar
14 with any research you had done in the case?

15 A. I don't recall that. They may
16 have or may not have.

17 Q. Had any of that research involved
18 the health effects of American tobacco?

19 A. I do want to be clear about this.
20 Some of that work certainly took into --
21 involved issues related to the fact that
22 there were health risks associated with
23 smoking, and the public was aware of those;
24 but it was not the type of research that I
25 have done, which my testimony is based

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1 specifically on the public awareness of
2 health hazards of smoking. I do, in
3 fairness, want to make that clear.

4 But I was certainly aware of the
5 larger parameters of this issue before
6 undertaking that specific research project.

7 Q. In your academic career, have you
8 ever received any grant money from a tobacco
9 company?

10 A. No, I have not.

11 Q. Has the department you work for
12 at the University of South Carolina, do you
13 know if they received any tobacco grant
14 money?

15 A. To the best of my knowledge, they
16 have not.

17 Q. Do you have a research assistant
18 or research assistants that helped you in
19 getting information you reviewed for this
20 case?

21 A. I have employed research
22 assistants since the time I began working in
23 1995, yes.

24 Q. Are those people connected with
25 the university, or do you independently hire

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1 these people? How does that work?

2 A. I think there have been probably
3 both cases. I have certainly used people
4 who were, at least initially, graduate
5 students and history Ph.D. candidates in
6 history at the University of South Carolina.
7 Some of them have since graduated and
8 continued to do some work on an occasional
9 basis, some research work for me on an
10 occasional basis.

11 And also I had to do some
12 research in the Miami, Florida, area in which
13 I employed or used as researchers, and for
14 very brief periods of time, projects, people
15 who were students at, I believe it is,
16 Florida International University that were
17 recommended to me by a historian I knew in
18 that area and who did some work for me down
19 there. And they were not affiliated with
20 the University of South Carolina to complete
21 my answer to your question.

22 But that is the -- and -- yes.
23 I think I answered that question.

24 Q. Yes. And in the case of the
25 assistant from Florida -- or was it more

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1 than one assistant down in Florida?

2 A. I believe it was two, yes.

3 Q. Did you select those two

4 assistants from a list of recommendations
5 from someone down there?

6 A. My recollection is that I talked
7 to the historian down there that I knew and
8 asked -- told him what I needed. It was a
9 really fairly specific sort of thing. And
10 he recommended and described to me two or
11 three individuals and their qualifications.
12 So I told him to find one that was available
13 to do it in the very nearer term. And he
14 did. So I relied on his recommendation in
15 that case.

16 Q. Have you ever used an assistant
17 at the recommendation of a law firm?

18 A. No, I have not.

19 Q. Do you ever bill for your
20 research assistants' time to the Jones, Day
21 law firm?

22 A. Would you clarify that question?
23 Do I -- I am not sure I understand it
24 exactly.

25 Q. Well, who, if anyone, is paying

1 for their time spent by the research
2 assistants?

3 A. I understand your question now.
4 They are paid by the Jones, Day law firm,
5 and they -- I actually send the bills off,
6 and they are in a form -- they are formatted
7 like mine are, but they, of course, know how
8 many hours they worked and prepare them.

9 Q. So that would be a separate
10 statement from the statements that you
11 provided here; is that correct?

12 A. That is correct.

13 Q. Do you have any idea of how much
14 time research assistants have spent working
15 on this case, the Martin Little case?

16 A. Let me think about that for a
17 minute. I can probably give you a rough
18 estimate.

19 Probably in the range of 40 to 60
20 hours. Almost all of it, the great bulk of
21 it, devoted to the collection of newspapers.

22 Q. And the newspaper articles that
23 they collect, do you ask for specific
24 articles or are they selecting articles and
25 bringing them to your attention?

1 A. Well, the way that process works
2 is that basically I describe the sort of
3 research protocol, essentially asking for them
4 to provide -- to search papers for certain
5 periods of time for any articles relating to
6 smoking and health or issues related to those
7 two issues and to make copies of what they
8 find and to bring them to me.

9 It really -- their role is simply
10 a data collection role, not in an analytical
11 or interpretive role.

12 Q. When they copy an article and
13 give it to you for your review, is it just
14 a copy of the text of the article, or do
15 you see it as it appeared in context? Let
16 me explain. I mean, where it appears on the
17 page, that sort of thing.

18 A. Well, that is probably a two or
19 three part answer to that question. I have
20 done -- I don't, because of time constraints,
21 don't do it all, but I do some of it and
22 have done a good bit of this data collection
23 myself, and I try, in any newspaper that I
24 researched to do some of it myself, to get a
25 sense of those very things that you are

1 talking about, what the newspaper was like
2 generally, where these stories appear, and
3 that sort of thing.

4 So I feel like, based on the fact
5 that I do some of the actual data collection
6 myself, in most cases that I have a good
7 sense of it. But it is also possible, based
8 on the material, the copies that are given
9 to me, usually to see the page number and
10 some context on the page. It is not -- the
11 copies aren't so narrow in most cases to get
12 only the article. So you get a pretty good
13 sense of that even from the copies.

14 And I think combined with the
15 actual newspaper work that I personally have
16 done, rather than to rely on assistance to
17 do it, I have a pretty clear sense of that
18 in most cases.

19 Q. I take it in general when the
20 research assistant brings you the articles,
21 it is just of the article itself?

22 A. Yes. But usually those -- just
23 to be clear, the copy, the article and the
24 size of the page aren't usually co-terminus,
25 and it is always labeled with a date, and

1 frequently the page and section number is on
2 the copy. Not always, as I recall, but
3 frequently.

4 Q. What about television or radio
5 reports; is that some of the material that
6 you consider?

7 A. Yes, it is.

8 Q. How do you review those?
9 Let's take television, for
10 example. Would you see videotape, or would
11 you read a written script? How would you
12 review television?

13 A. The majority of the work I have
14 done into television was done at the
15 Vanderbilt television new archives in
16 Nashville, Tennessee, and they have actual
17 video clips of television news and special
18 report-type things which you can call up from
19 their archives just like you call up books
20 at a library, and they have equipment for to
21 you sit there and essentially review those.

22 They do also have finding aides
23 which list -- give you a brief summary of
24 what that clip is about. And in order to
25 -- in my work at Vanderbilt, I try to watch

1 all of the longer stories, say 30 seconds
2 and above, that were on television news, and
3 I read the descriptions of most of the
4 shorter ones, which were five, ten, or 15
5 second things because that would have been
6 almost too voluminous to do in the time I
7 was there.

8 The Vanderbilt television news
9 archives also has selected video disks of
10 special reports, things that were on like CBS
11 reports and that weren't just part of the
12 nightly news. And it seems like I reviewed
13 some of those there as well.

14 I think that there may be some
15 other -- I certainly have read about
16 television, their stories and reporting in
17 the print journalism as well, and I would --
18 when I talk about television, some of the
19 information that I have gleaned was from
20 reading about it, but knowing it was on
21 television or had a story about it on
22 television. But probably the majority of my
23 work was done at the Vanderbilt television
24 news archives that I described.

25 Q. When you would see a clip from

1 the Vanderbilt news archives, would that be
2 presented in context of the program in which
3 it appeared, or would that just be a video
4 clip of the story itself?

5 A. With the exception of some of the
6 special reports, it was usually a clip, just
7 the clip from the show. It wasn't -- you
8 didn't have the whole show. But to complete
9 the answer, I believe in most cases where in
10 the news broadcast the story appeared was
11 indicated either by a time or some indicating
12 mechanism on the finding aid, like this was
13 the lead story or this ran at 16 minutes
14 into the telecast, but you didn't see -- so
15 you did have some indication where it came
16 in the news cast, if that is the kind of
17 information you are asking about.

18 Q. Yes. So you would know what time
19 in the news cast it would have occurred;
20 correct?

21 A. That's right, what time in the
22 news cast it occurred, I believe, at least
23 on a number of occasions. And how long the
24 story was, was it 30, 60, 90, or maybe a
25 fewer, two-minute section.

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1 Q. But I take it you would not have
2 known what any of the surrounding stories
3 would have been from that information?

4 A. There were probably some cases
5 where you had that, but as a general kind,
6 the majority of the time, no. You probably
7 - sometimes there was a sort of transition
8 that you could hear so you could know what
9 they had reported. But, no, it was focused
10 pretty much on the smoking news story.

11 Q. You mention in the materials that
12 you have reviewed in preparation for this
13 case deposition testimony of Martin Little
14 and Suzanne Little.

15 Taking the deposition of Martin
16 Little, what in particular are you relying on
17 from his testimony that supports your
18 opinions in this case?

19 A. Could I have my -- or your copy
20 or the copy of those notes?

21 Q. Certainly.

22 A. The reason that I suggested to
23 defense counsel that it is valuable for me
24 to read essentially fact depositions about
25 plaintiffs is that I do get a sense of the

1 tragic story of their lives. Since I have
2 to testify about levels of public awareness
3 in the community, that were common to the
4 community, the various communities in which
5 people live is an important thing to know.

6 It is also helpful to know what
7 particular kinds of information, what sources
8 of information these individuals used for
9 their general awareness of things, although,
10 I am not really confining myself, of course,
11 by any -- the standard is I am interested in
12 information that is widely disbursed in the
13 community, not just that any one individual
14 saw some specific piece of information, but
15 what information was out there in the entire
16 community. So these depositions primarily
17 help me get a sense of the life story of
18 this individual and where they lived and what
19 times and maybe where they went to school
20 and those kinds of things.

21 Those are primarily what I am
22 looking for when I read these depositions.
23 There may occasionally be some other
24 information that is useful to my research,
25 but that basically is what I am interested

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1 in learning from reading those.

2 Q. Well, now, are you going to be
3 offering any opinion as to Martin Little's
4 specific awareness of the health hazards of
5 cigarette smoking?

6 A. I think, as I suggested earlier,
7 I have not discussed with anybody the exact
8 content of my testimony in this case, other
9 than it will cover these general areas that
10 we are talking about. The -- I suppose you
11 can't entirely rule out the possibility that
12 I might make some reference to something or
13 that attorneys, in asking questions, might
14 make some reference to some statement that he
15 made in his -- or somebody else made in
16 their sworn testimony, but it would just be
17 to rely on that as a factual statement.

18 Q. Okay. You are not bringing any
19 analysis as a historian to Martin Little's
20 testimony, I take it. You are just
21 gathering, getting factual information about
22 where and when he lived, is that correct?

23 MR. KOETHE: I object to the form
24 of the question.

25 THE WITNESS: Could you clarify

1 that? I am confused by that question. I
2 am sorry.

3 Q. (By Mr. Evans) Well, it was an
4 unclear question because I was just trying to
5 clarify your last answer.

6 It is your understanding that your
7 testimony is going to be about the
8 dissemination of information to the general
9 public, is that correct?

10 A. And the availability of that
11 information to the public and information
12 indicating the public had received that
13 information, all those things, yes.

14 Q. Let's take a bit of that
15 information, an article, a news story. Will
16 you also testify that, based on your
17 research, Martin Little saw that story?

18 A. Probably the best answer I can
19 give at this point is that certainly there
20 are -- I guess I still have to answer that
21 in kind of a general way. Certainly there
22 are things that either Martin Little in his
23 deposition or testimony and comments of
24 others that were indicated that were sources
25 of information that he used.

1 Well, I may very well have talked
2 about information that came into the public
3 domain from those very sources that Mr.
4 Little mentioned and things that, certainly
5 by his testimony, he would appear likely to
6 have seen or maybe in some cases did see.
7 But I also won't be confining myself to
8 that, to those sources of information. It
9 is just the fact that, in presenting my
10 testimony about public awareness, I would
11 fully expect to present the type of coverage
12 these issues received in Time and Newsweek.
13 And I believe in glancing my notes, I
14 believe he indicated he read Time and
15 Newsweek.

16 So I can't say -- there clearly
17 could be some overlap between what he
18 acknowledged looking at and what I am going
19 to present. But I am looking at it from
20 these are the types of information that was
21 received in the communities in which Martin
22 Little received.

23 Q. Let me ask you the same sort of
24 question about the deposition testimony of
25 Suzie Little.

1 Is there anything in particular
2 from the deposition of Suzie Little that you
3 rely on to form the basis of your opinions?

4 A. Well, again, she provided
5 information that Martin Little read the
6 Sunday New York Times and the Charleston News
7 and Courier and Newsweek and Time magazine,
8 certainly the -- and certainly I am liking
9 to present information from those sources.
10 Traditionally, the focus of my direct
11 testimony has been from a much earlier period
12 than Suzie's knowledge of Martin Little comes
13 from.

14 So without knowing exactly what
15 questions I am going to be asked in direct
16 examination, it's really hard to say, but
17 certainly I might present some material from
18 these sources, but I am not sure that I
19 would be relying on her indication that he
20 read those. It is sort of hypothetical at
21 this point, and it is hard to say.

22 Q. You mentioned four other
23 depositions. The deposition of Martin Little's
24 sister. Would that be Virginia Canon?

25 A. Yes, I believe that is correct.

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1 Q. And also Steven Schmutz, Lloyd
2 Pearson, and Dr. Arana. Is that the four
3 you mentioned?

4 A. Yes.

5 Q. Did you select those four persons
6 that you wanted to read deposition testimony
7 of, or were those provided by defense
8 counsel?

9 A. Well, I requested defense counsel
10 to provide me with those depositions, and the
11 way I requested them was, you know, any
12 deposition that is essentially a deposition
13 about the facts of the plaintiff's life as,
14 you know, not, I guess, expert testimony and
15 that sort of thing, but any sort of thing
16 that is about -- the depositions that are
17 about the facts in the plaintiff's life, and
18 those -- they said these are the witnesses
19 that fall into -- or people that we
20 interviewed that fall into that category.
21 And they have sent those.

22 If there are others -- I would
23 presume that I would receive those if there
24 are any others. So it is just sort of a
25 standing request to receive any deposition

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1 that deals, basically, with the facts of
2 Martin Little's life, if that is a
3 distinction that makes any sense.

4 Q. Is there anything from those four
5 depositions that you can recall that you are
6 particularly relying on in this case?

7 A. Well, I mean, I should probably
8 say that, in some ways, I am not sure I am
9 relying on these depositions for the content
10 of my opinions in general. I rely on
11 depositions to provide facts that take me in
12 certain directions for research. So it is
13 not that I am relying on them basically for
14 a basis of opinion.

15 It does seem to me that I got,
16 and I will say up front, I don't remember
17 exactly what, and I did not take notes on
18 those depositions, it seems to me that the
19 deposition of Mr. Schmutz, I believe, an
20 attorney who is a friend of Martin Little,
21 had some information that was useful to my
22 research. I believe that -- I don't recall
23 much information in any of those other
24 depositions that was particularly useful to
25 me.

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1 Q. What was the information in Mr.
2 Schmutz' deposition?

3 A. Well, as I was indicating, I
4 really don't recall it specifically, but it
5 does seem to me that he had known Mr. Little
6 at an earlier time in his life. It wasn't
7 just recently. And that I got some
8 confirmation from that about, you know, where
9 MR. Little's parents lived, where
10 he was at certain times. Not that that
11 information, I guess, was available in other
12 depositions as well, but sort of
13 confirming-type information.

14 Q. Have you done any research or
15 study about public knowledge or awareness of
16 any consumer product other than cigarettes?

17 A. No, I have not undertaken a
18 systematic and thorough study of, as I
19 understand your question, about products other
20 than cigarettes. I have certainly seen in
21 my research in cigarettes comparisons made
22 between it and other products of all kinds
23 and over a long period of time, but I have
24 not, certainly not, undertaken research into
25 them in the way that I have cigarettes.

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1 Q. What is a product you have seen
2 it compared to?

3 A. Alcohol, alcoholic beverages
4 specifically, would be one example.

5 Q. And was the comparison done to
6 public awareness of dangers of alcohol?

7 A. Yes.

8 Q. Have you read any studies, or can
9 you name any studies or articles that discuss
10 public awareness or common knowledge about
11 the dangers of alcohol?

12 A. Any studies of that kind that I
13 have encountered in my research would have
14 been studies that I discovered doing research
15 on public awareness of the health hazards of
16 cigarette smoking, which included the type of
17 comparison that we were just talking about,
18 not independent of those, no.

19 Q. But do you recall any? I mean,
20 did you run across some?

21 A. Well, certainly, for example, when
22 you say studies, if you mean systematic,
23 scientific studies, that would be another
24 question; but certainly I ran into a number
25 of comparisons between cigarettes and alcohol,

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1 both of some more sort of impressionistic and
2 some more systematic, but I have not
3 encountered and not looked for, since I am
4 not a scientific expert, some sort of
5 scholarly literature comparing the health
6 risks of alcohol to the health risks of
7 smoking, if that is the nature of your
8 question.

9 Q. Not exactly. I do want to focus
10 on public awareness of the health risks, and
11 I wondered had you come across any scholarly
12 -- we will just say scholarly article
13 regarding public awareness of the health
14 risks of alcohol?

15 A. With the qualification scholarly
16 article, I don't recall and don't believe
17 that I have read such a study.

18 Q. Can you name for me a scholarly
19 article or article that would appear in, say,
20 a peer review journal on public awareness of
21 any other consumer product, the public's
22 general awareness of the topic?

23 A. Again, working from a
24 recollection, I don't recall seeing any such
25 comparison in a peer review journal that I

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1 have consulted. That is the best answer.

2 It is possible, but I don't recall.

3 Q. Do you think tobacco might be
4 unique in this analysis?

5 A. What analysis are you talking of?

6 Q. An analysis, a scholarly analysis
7 of the public's awareness of the risks of
8 the product.

9 A. I am not sure that I have the
10 expertise to answer that question. I have
11 researched the public awareness of tobacco
12 and the health risks associated with its use.
13 I would assume that there might be litigation
14 involving other products and similar research
15 might be done or have been done, but -- so
16 I wouldn't have any basis for saying tobacco
17 is unique. What my research has been into
18 is the question of what was the public
19 awareness, what was the public's common
20 knowledge about the health hazards of
21 cigarette smoking.

22 And I couldn't really offer an
23 informed opinion about whether there is
24 anything unique, except to say that compared
25 to -- I certainly could do this and have

1 done this, if this what you -- maybe I
2 misunderstood your question and, therefore,
3 have not answered it in a straightforward
4 fashion, but certainly I have undertaken a
5 sort of comparative study of knowledge about
6 the health risks of smoking versus knowledge
7 of any other number of things in the same
8 period of time. And certainly I could say
9 that public awareness of the health hazards
10 of smoking is among the highest levels of
11 public awareness of anything that surveyors
12 ask questions about. I might not go so far
13 as to say unique, but it was certainly among
14 the highest. It was right up there with the
15 problems of polio in the 1980s when polio
16 was one of the scourges of American society.

17 So in that sense, yes, I have
18 looked at that conduct of comparison, but,
19 no, I have not undertaken the same sort of
20 systemic study of alcohol that I have of
21 tobacco.

22 Q. I understand the comparisons you
23 may have done in your own work, but we began
24 by talking about anybody else's work, and I
25 take it you are not familiar, you cannot

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1 cite to me any scholarly articles written by
2 anybody else on the topic of the public's
3 general awareness of any consumer product
4 other than tobacco.

5 A. In order not to mislead you, I
6 don't want to make a blanket statement that
7 I have not seen any such thing; but I
8 certainly have not undertaken to make a
9 systemic analysis of that literature.

10 Q. So then would it be fair to say
11 that you have not compared the methodology
12 you have used on tobacco with anyone else's
13 methodology on another consumer product?

14 A. Well, I have used the methodology
15 in developing my opinions on tobacco, on
16 historical public awareness that historians
17 used as we talked about very early in this
18 deposition in determining the public's
19 knowledge of a variety of things and in the
20 historical context. And in that sense, I am
21 certainly using a common and shared and
22 broadly used methodology.

23 But I have not, to the best of
24 my recollection, compared it to work on
25 another consumer product.

1 Q. Okay. Now let's return to
2 tobacco.

3 Who else besides yourself has
4 published research concerning the public's
5 awareness of the hazardous of tobacco?

6 A. Let me clarify the question. Are
7 you saying am I relying on the work of other
8 scholars?

9 Q. No, that is not my question. I
10 am asking about your awareness of other
11 scholarly work on this issue of the public's
12 awareness of tobacco.

13 Can you cite for me published
14 studies on the public's awareness of the
15 health risks of tobacco?

16 A. I guess a two-part answer to
17 that, because I want to make it perfectly
18 clear that I am basing my answers in this
19 case on the research I have done myself and
20 my evaluation of that data that has been
21 done, not exclusively, but primarily on what
22 historians would call primary source material.

23 I am not aware -- well, there is
24 an account, which I want to indicate I am
25 not relying on it, but there is an account

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1 of public awareness of the health hazards of
2 cigarette smoking in a book called A Dread
3 Disease by Professor James Patterson, which
4 is one of the -- who features at one of the
5 prominent New England schools. It is a
6 study of cancer in American society, and it
7 includes a section in which he discusses
8 public awareness of the health hazards of
9 smoking.

10 so that would be one example of a
11 work by a historian that has been peer
12 reviewed and published.

13 Q. I am sorry, the book was called A
14 Dread Disease. What was the author's name?

15 A. James Patterson.

16 Q. That, I take it, though, is not a
17 book that you have listed as one of your
18 reliance materials; is that correct?

19 A. That's correct.

20 Q. Well, are you familiar with the
21 1989 Surgeon General's report?

22 A. Yes, I am familiar with the 1989
23 Surgeon General's report. There is a sense
24 in which the Surgeon General's report is not
25 really a primary source for the period in

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1 which my research was focused on; but it
2 reprints some data, so it was a convenient
3 compilation of data that is otherwise
4 available, and you can get, and in most
5 cases I have, in some cases anyway, I have
6 gotten otherwise; but there is some data in
7 there that I have used.

8 Again, I am not sure that there
9 is data in there that I rely on that is not
10 available elsewhere, but I do sometimes
11 reference that. I am familiar with it, yes.

12 Q. Are you familiar with the chapter
13 that concerns the public's awareness of the
14 dangers of cigarettes?

15 A. Yes, I am familiar with that
16 chapter.

17 Q. Have you listed that as one of
18 the things you rely on?

19 A. To the best of my recollection,
20 in developing that list, no. For pretty
21 much the reason I was trying to suggest
22 earlier, that I tried to rely, whenever
23 possible, on primary sources that I collected
24 myself and were in the public domain at the
25 time my research focused on.

1 And so there is some data that is
2 used in that chapter that is data that I
3 have relied on, but I wouldn't say I have
4 relied on that chapter, if you understand
5 what I am saying.

6 Q. Yes. That will answer my
7 question.

8 But there is data that was used
9 in the Surgeon General's report that you have
10 also relied on?

11 A. Yes. And usually it was data
12 that was available to me elsewhere as well
13 as in the 1989 Surgeon General's report.

14 Q. Just as you sit here today, can
15 you give me any specific data that is
16 reported in the Surgeon General's report that
17 you also independently looked at?

18 A. Yes. There is some -- well, at
19 least in my recollection of the -- I really
20 don't want to give you misleading answers.
21 I would probably need to see that chapter to
22 give you a reliable answer.

23 (Plaintiff's Exhibit-8 was marked
24 for identification.)

25 Q. (By Mr. Evans) Dr. Ford, please

1 take the time you need to just familiarize
2 yourself with what I have given you. Let me
3 represent that this is Chapter 4 from the
4 1989 report of the Surgeon General, and the
5 chapter is titled Trends in Public Beliefs,
6 Attitudes, and Opinions About Smoking.

7 What I am asking you to do is
8 give me examples of source material in this
9 chapter that you also relied upon in coming
10 up with your opinions. And again, certainly
11 take all the time you need.

12 MR. KOETHE: Just for the record,
13 did we specifically identify what this
14 exhibit was? This appears to be just a
15 portion --

16 MR. EVANS: This is just Chapter
17 4 from the 1989 report of the Surgeon
18 General.

19 THE WITNESS: On -- well, just
20 for an example, on page 176, there are two
21 surveys referenced, the audits and surveys
22 for 1964 and the audits and AUTS for 1966.
23 These were public opinion surveys conducted
24 by a wing of the United States Government,
25 and I believe I did use those surveys in the

1 formation of my opinions. I believe I had
2 found those surveys in the government
3 document section of our library, for example.
4 And they, of course, are used here by our
5 Surgeon General, and that is a very good
6 example of what I was try to go refer to.

7 Q. (By Mr. Evans) Now, would I find
8 reference to this adult use of tobacco survey
9 in this list of reliance materials you have
10 given me?

11 A. I believe that you will. On Item
12 439, Item 439 on the list, I believe that is
13 referring - certainly in identifying those
14 two in this report, it is my intention that
15 they are referring to those two.

16 Q. Are you familiar with a study
17 that is often called the Fishbein Study,
18 Fishbein? Is that familiar to you?

19 A. I certainly don't recognize it by
20 that title.

21 Q. Hold on one second. I don't
22 think we need to mark this. Let me just
23 show you that.

24 I am showing you a report called
25 Consumer Beliefs and Behavior With Respect To

1 Cigarette Smoking, A Critical Analysis of the
2 Public Literature put together by Martin
3 Fishbein, Ph.D., and it is subtitled A Report
4 Prepared for the Staff of the Federal Trade
5 Commission.

6 I am just asking you if you have
7 seen this document before.

8 A. I have no recollection of seeing
9 this document before.

10 Q. Okay.

11 MR. KOETHE: Are we going to mark
12 this, Jerry?

13 MR. EVANS: No.

14 Q. (By Mr. Evans) Not to state the
15 obvious, but if you are not familiar with
16 having -- if you don't recollect having seen
17 the document, I take it this is not an
18 article that you intend to rely on to form
19 the basis of your opinions?

20 A. Certainly with relationship to
21 that specific article. I would want to add
22 to that sort of stipulation that, having not
23 read that, there certainly may be material in
24 there that is similar to material that I
25 relied on or that may use identical material

1 in it; but I am certainly not familiar with
2 that report as that report, if that is a
3 clear answer.

4 Q. I take it you will be relying on
5 polling data. We have discussed that
6 earlier, and you have listed some polling
7 data in here; is that correct?

8 A. Yes, that is correct.

9 Q. Are you an expert on polling?

10 A. As do other historians who do
11 research in area where polling data is
12 available, I use polling data as one of the
13 sources as a formation of my opinions that,
14 presenting here and -- would and have done
15 so in other research.

16 I am certainly trained to, I
17 think, adequately for a historian, interpret
18 and understand polling data. I would not
19 say that I am a person who would claim that
20 I have expertise in designing and setting up
21 and actually conducting a poll, a poll from
22 that sort of logistical end of it, but I
23 certainly believe I have a historian's
24 expertise in understanding polling data.

25 Q. But you have not conducted any

1 polling on your own on this topic, correct?

2 A. That is correct.

3 Q. Would you consider yourself an
4 expert in statistics?

5 A. Well, as I testified earlier in
6 the deposition, I did do quantitative
7 analysis as not a Ph.D. language for that.
8 And actually in 1983 and 1984, I audited two
9 graduate level statistics courses, polling --
10 let me say this precisely. Political science
11 courses which were focused on statistical
12 analysis that were taught by tenured faculty
13 members there at USC, and I audited those
14 courses. So I think with my training in the
15 graduate career and in the continuing
16 education I undertook, I am certainly well
17 prepared to evaluate polling data and
18 interpret it.

19 I would not -- I do not have a
20 Ph.D. in mathematics and statistics.

21 Q. Have you ever taught any courses
22 on statistics?

23 A. No, however, in graduate level
24 courses at USC, I did engage a bit in
25 training graduate students about simple

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1 statistical procedures on an as-needed basis
2 for theses and dissertations. But these are
3 pretty simple kind of statistical methods.

4 Q. But do you intend to interpret
5 polling data as part of your polling opinion,
6 or have you made independent interpretations
7 of polling data in formulating your opinions?

8 A. Polling data is one source among
9 many I have used in reaching my opinions
10 about public awareness of hazards in smoking.
11 And I am using my interpretation of that
12 polling data based on polls at any point by
13 reputable polling organizations whose method
14 is well explained and certainly appears to
15 meet basic standards for reliability.

16 I do, in fact, intend to use that
17 as one type of material that discusses public
18 awareness and addresses the issues of the
19 public awareness on the aspects of smoking.

20 Q. So are you able to evaluate the
21 methodology used in a poll to come up with
22 your own assessment of the poll's
23 reliability?

24 A. I think there is a two-part
25 answer in this case. In the first place, I

1 have attempted to only use polls that were
2 conducted by reputable polling organizations
3 and ones generally perceived in the field of
4 history and other fields as being reputable
5 polls and organizations and where you were
6 able to obtain an understanding of what
7 method they had used. And based on my
8 training and experience, those did seem to be
9 -- if those were reliable methods, then those
10 would be the sort of polls I would use.

11 Q. Are you relying on polls, any
12 polls conducted by the Roper Organization?

13 A. I would have to check. The Roper
14 Organization maintains at the University of
15 Connecticut an archive of polling data which
16 includes a wide variety of polls done by a
17 number of polling entities and organizations.
18 And certainly it is part of my research, and
19 you can view these on line. I subscribe to
20 the Roper Polling Center and looked at a
21 number of the polls that were in the archive
22 of the Roper Polling Center.

23 Off the top of my head, I don't
24 recall that any of the polls which I have
25 listed here, although I can stand corrected

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1 if I want to go through every item, is
2 specifically a poll conducted by the Roper
3 Polling Organization. But in the interest of
4 giving you all of the information, some of
5 the polls I did access through this Roper
6 Center for polling.

7 Q. Did you consider any of the polls
8 that the Roper Organization performed for the
9 Tobacco Institute in forming your opinions?

10 A. In forming my opinion, I didn't
11 consider any polling data that wasn't
12 available in the public domain, either in
13 some form or fashion. And it wasn't made
14 available with reasonable promptness after it
15 was done. There was an abundance of polling
16 available, data available in the public
17 domain. So, no, if it was an internal poll
18 taken for anybody, I don't think that I have
19 relied on it in forming my opinions.

20 Q. Were you aware of polling done
21 for the Tobacco Institute?

22 A. In trying not to make -- well,
23 let me just give you the phrased answer the
24 best way I can. I am certainly aware from
25 two or three sources that there were polls

1 taken. I can't recall off the top of my
2 head whether they were done for the Tobacco
3 Institute or for individual tobacco
4 manufacturers or perhaps another entity, but
5 I am aware that there were polls done.

6 In fact, the Surgeon General's
7 report of 1989 -- that is one way that I
8 know about this is that references polls they
9 requested from the tobacco industry. My only
10 hesitation is I don't know whether it was
11 from the Tobacco Institute specifically, but
12 certainly -- and they did -- in at least
13 one, if not two, was a Roper poll from the
14 Surgeon General -- that was requested at some
15 point and turned over to the government and
16 are used in the Surgeon General's report of
17 1989 in that chapter that we talked about.

18 So on that basis, I have that
19 knowledge that they were done, yes.

20 Q. You do list some Gallup polls,
21 and you include some Gallup polls at any
22 point in 1964. Can you tell me specifically
23 if this is information you are going to
24 specifically rely on for your opinions in
25 this case?

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1 A. Certainly polls that I have listed
2 here on this list are polls that I would
3 specifically rely on for my testimony in this
4 case, yes.

5 Q. Did you prepare a response, any
6 sort of written response, to the Gallup
7 organization's criticism of your use of the
8 1954 polling data?

9 A. Specifically what criticism are
10 you referring to?

11 Q. Are you aware of an article by
12 the Gallup organization that was critical of
13 your testimony in a case in the way you were
14 interpreting the Gallup polling data?

15 A. Again, what sort of article or
16 what are you referring to specifically?

17 Q. Well, I will be glad to show it
18 to you.

19 (Plaintiff's Exhibit-9 was marked
20 for identification.)

21 Q. (By Mr. Evans) Are you familiar
22 with the document we just marked as Exhibit
23 9?

24 A. The best answer I think on this
25 is that the content of this article is

1 something that I am aware of. The cover
2 sheet may not be something that I have seen
3 before.

4 Q. But you are aware of the content
5 of this article?

6 A. Yes. I received a copy of this
7 article from the assistant editor of the
8 journal called Public Opinion Quarterly, I
9 believe, in July of 1998. And that is how
10 I have seen this document.

11 Q. Did you ever prepare any sort of
12 response to this article?

13 A. The request to me from the, I
14 believe it was, the assistant editor, I
15 believe Mr. Peter Miller was his name, of
16 the Journal of Public Opinion Quarterly was
17 to ask me if I would serve as a referee for
18 this article since it addressed my expertise.
19 And he sent me a copy of this article.

20 I read it, thought that, while I
21 found it full of inaccuracies, I thought it
22 would be inappropriate for me to serve as a
23 peer reviewer on it, and I informed Mr.
24 Miller that I did think it would be
25 inappropriate for me to serve as the peer

1 reviewer.

2 And in doing so, I told him what
3 some of the problems that I saw with the
4 essay in this form were, and I believe that
5 I did write Mr. Miller. Yes, I did write Mr.
6 Miller a letter outlining, both explaining
7 why I didn't think it would be appropriate
8 for me to serve as a referee, and what I
9 thought some of the problems with this
10 article in this form were.

11 So, yes, I did respond to this in
12 that form in terms of a letter to the
13 assistant editor of the journal to which it
14 had been submitted for consideration for
15 publication.

16 Q. To your knowledge, was the letter
17 you wrote ever published?

18 A. To my knowledge, it was not, nor
19 was the -- and I would add that peer
20 reviewers rejected this essay as not being
21 acceptable for public education and public
22 opinion.

23 Q. What editors rejected it?

24 A. Editors of the Public Opinion
25 Quarterly.

1 Q. Could you point out to me what
2 you consider to be factual inaccuracies in
3 this?

4 MR. KOETHE: Hey, Jerry, this
5 might be a good time to break. That
6 question could take a long time to answer,
7 and it is a little after 12:00.

8 MR. EVANS: That is fine with me.

9 MR. KOETHE: Do you want to take
10 a break for lunch?

11 MR. EVANS: No problem.

12 (A recess was taken.)

13 Q. (By Mr. Evans) Welcome back,
14 Dr. Ford. I hope you had a nice lunch.

15 When we left off, I was asking a
16 question about a paper from the Gallup
17 Organization entitled The Tobacco Industry
18 Summons Polls to the Witness Stand.

19 I had asked you a rather
20 open-ended question about factual errors in
21 this. Allow me, if I can, to speed things
22 up. I will just ask you, as a result of
23 this paper, which you said you did read at
24 some point in time, did you alter or change
25 any of the opinions you had formed up to

1 that time?

2 A. No, I did not.

3 Q. Did anything in this paper cause
4 you to re-interpret any of the polling data
5 you had looked at previously?

6 A. Well, I certainly, with regard to
7 reading this paper, took another look at all
8 of the polling data that I had reviewed,
9 which was substantial, and I concluded that
10 my findings, in my opinion that I testified
11 to, was, in fact, justified by it.

12 So, no, it did not. It did lead
13 me to review the primary evidence of -- once
14 again, as I think any scholar would do, I
15 determined my opinion had been accurate.

16 Q. We talked a little bit about this
17 earlier, but let me ask more specifically, in
18 terms of the articles and news items on the
19 health risks of tobacco, how can you
20 determine what any member of the public
21 understood or retained from a particular news
22 story article? What sources would you go to
23 for that?

24 A. Your question is how people might
25 react to a particular story?

1 Q. That is correct. The public's
2 understanding or retention of the material,
3 not just the fact that the story appeared.

4 A. I think that it is, as a general
5 proposition, very difficult to ascertain what
6 influence one particular story might have,
7 and certainly with regard to a specific one
8 particular story to a specific individual is
9 not the kind of analysis that I am
10 undertaking.

11 What I am trying to determine is
12 what was common knowledge in a community,
13 what information was available to people in
14 that community.

15 Q. Are you going to testify at all
16 about the comprehension or understanding of
17 that material?

18 A. Well, my testimony will include,
19 you know, not only what information was
20 available to the public, but in various ways
21 that I can tell that the public as a whole,
22 opinions they held based on the total
23 information at their disposal. It is not
24 necessarily one particular article or one
25 particular piece of information. Does that

1 answer your question?

2 Q. I am not sure. Could I have the
3 answer read back? I am sorry.

4 (The record was read by the
5 reporter.)

6 Q. (By Mr. Evans) Okay. So your
7 testimony will include opinions that the
8 public held. From that, will you make a
9 conclusion about their comprehension or
10 understanding of material that was presented
11 to them?

12 A. I -- the best way I can answer
13 that is I will certainly testify about what
14 the public was aware of, what it knew, and I
15 may offer some testimony, as I have in the
16 past, about not only what was common
17 knowledge in the community but a little bit
18 about the public's evaluation of that
19 knowledge in terms of whether or not they
20 decided to believe this or that was, in
21 fact, risky behavior.

22 I don't know whether you could
23 call that comprehension of the articles. I
24 think it is a reflection of what is common
25 knowledge in the community. So it is

1 comprehension and evaluation of a wide
2 variety of information from a wide variety of
3 sources, all of which I am going to attempt
4 -- or most of which I will attempt to
5 testify to some extent.

6 Q. Have you done any studies of the
7 awareness levels of particular sub groups of
8 the general public? Let me give you a
9 specific example. Have you done a study of
10 the awareness level of 15 year olds to the
11 issues of smoking and health?

12 A. Certainly I have seen data on the
13 awareness of different categories of people.
14 Not usually so specific as simply 15 year
15 olds, but youth, say 9th to 12th grade, 15
16 to 18 or 14 to 18 is usually specified.
17 So, yes, I have seen some breakdown of the
18 population and to other sub groups, yes.

19 Q. Do you also break down according
20 to time periods, say, what group of people
21 were aware in 1960 versus what a group of
22 people were aware in 1970?

23 A. Certainly there will be -- there
24 has been -- I made some analysis of
25 responses to polling questions over time, and

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1 that would seem to fall in the general
2 category embraced by your question.

3 Q. Let's take the youth group and
4 describe it as 14 to 18 year olds, which you
5 gave as an example of a way you had seen
6 youth groups. Is it your opinion currently,
7 as we sit here in the year 2000, that the
8 14 to 18 year-old group have a high level of
9 awareness of the risk of cigarette smoking?

10 A. Yes, it certainly is.

11 Q. Is it your opinion that, in 1975,
12 and if you want to shift that a year or
13 two, but let's take 1975 as a general
14 period, that the group of people age 14 to
15 18 had a high level of awareness of the
16 risks of cigarette smoking?

17 A. Yes, it is.

18 Q. Is it your opinion that, in 1960,
19 14 to 18 year olds would have had a high
20 level of awareness of the risks of cigarette
21 smoking?

22 A. Yes. There is certainly data,
23 certainly data available that suggests that
24 junior high and high school students in that
25 era had a high level of -- they were well

1 informed on the medical findings, a very high
2 level of awareness of the risk that
3 scientific studies were associating with
4 cigarette smoking at that time.

5 Q. So is it your testimony that a 15
6 year old who started smoking in 1960 was
7 making an informed choice to do so?

8 A. It is certainly my testimony that
9 a 15 year old in 1960 had abundant
10 information about the health risk of smoking.
11 The health risk was aware of -- well,
12 categorically the community was aware of the
13 health risks of smoking, and any decision
14 that that individual made was not in the
15 absence of health risks, of the health risks
16 of smoking, even though they were only 15
17 years old.

18 I would add to that that a 15
19 year old who was -- almost anyone who was
20 making that decision in 1960 was choosing to
21 do -- sales to minors were forbidden in most
22 states, so there was, I think, a strong
23 reason other than health risks to know that
24 they were making a decision that involved a
25 judgment on their part to sort of go against

1 what society considered had brought us along
2 to what was considered. But certainly they
3 were not making that decision in the absence
4 of the awareness of the risks of smoking.

5 Q. That judgment they were making was
6 an informed judgment, in your opinion?

7 A. In the sense that I, as a
8 historian, would use the word informed, they
9 certainly had been informed of the health
10 risks of smoking, yes.

11 Q. And that is what you are here as,
12 is as a historian; is that correct?

13 A. That is correct.

14 Q. Was it common knowledge in 1960
15 what components of cigarette smoke had been
16 classified as carcinogenic?

17 A. There had been widespread
18 publicity about various ingredients in
19 cigarettes that might be carcinogenic and
20 about the results that was ongoing. There
21 was also widespread publicity that the
22 specific ingredients were embraced or included
23 in the more sort of lay or non-chemist
24 description of cigarette tars and that
25 cigarette tars were being broken down and

1 analyzed by scientists in the search for
2 possible carcinogens. And some of these
3 specific substances had been identified and
4 publicized a great deal in the press as
5 these studies were underway.

6 Q. And that would fit your
7 understanding with the common level they were
8 publicized?

9 A. They were certainly issues that
10 the public was aware of.

11 Q. Was it common knowledge in 1960
12 what the ingredients, other than tobacco, in
13 a cigarette were?

14 A. There had been publicity
15 indicating what ingredients of cigarettes were
16 in at least at a general level that there
17 was some sort of moisturizing tobacco and
18 moisturizing agents. So there was a great
19 deal of publicity about that.

20 Q. If there was common knowledge as
21 far as the ingredients, other than tobacco in
22 cigarettes in 1960, then I assume that it is
23 your opinion that that common knowledge
24 existed in 1970 as well?

25 A. Well, could you clarify, perhaps,

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1 to help me clarify what you mean by
2 "ingredient"?

3 Q. Well, whether there were
4 ingredients other than tobacco and, if so,
5 what were those ingredients other than
6 tobacco in a cigarette, was that common
7 knowledge?

8 A. I guess I would have to give a
9 sort of multi-part answer to that. Certainly
10 in this time period there was an unawareness
11 that, based on the publicity -- well, there
12 had been widespread publicity. I don't know
13 that I have seen polling data on the level
14 of this, but there was certainly widespread
15 publicity that the information was broadly
16 and publicly available that moisturizing
17 agents were used in cigarettes. And, of
18 course, there were menthol flavorings in the
19 time period that we are talking about.

20 The other part of the answer
21 would be, and I do want to be clear about
22 it, I am not saying that the public can
23 identify every possible, you know, chemical
24 compound that might be in cigarette smoke.
25 I know that would not be the case. But

1 there was a general knowledge that there were
2 lots of compounds in cigarette smoke, and
3 those were generally referred to in the lay
4 press as tars. And as a non-chemist myself,
5 that is about as far as I can even go into
6 analyzing that.

7 Q. Was there a common knowledge of
8 what the term tar meant? Again, let's stick
9 with 1950.

10 A. Well, there had been for a number
11 of years a lot of publicity about the, you
12 know, product of burning of tobacco,
13 cigarette tobacco, and that tars were part of
14 the by-product of this process and were
15 included in cigarette smoke.

16 And at least in terms of
17 information that was disseminated to the
18 broader general public, this was the category
19 of materials which scientists were interested
20 in analyzing, the health effects of cigarette
21 tars.

22 Q. Have you seen any studies or data
23 that suggests otherwise? Have you seen
24 studies or data from the 1960s or 70s that
25 suggests that the consumer has very little

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1 knowledge about what cigarette tar is?

2 A. I would have to answer that by
3 saying it would really depend on what you
4 accept as the definition of cigarette tar.
5 I think there was a broad public
6 understanding that these are a number of
7 chemical compounds that are produced in the
8 process of burning tobacco and that the
9 public was certainly aware by this time, you
10 know, that many people felt and many people
11 in the public health community as well that
12 there should be the -- that the development
13 of lower tar cigarettes would be a positive
14 development. It wouldn't be as good as
15 stopping smoking altogether, but that tar was
16 -- tar embodied within it a lot of the risky
17 potentially dangerous material in cigarettes
18 and that levels of tar were worth knowing
19 about.

20 I think that information was
21 broadly disseminated to the public in the
22 time period you are asking about.

23 Q. Well, my question was: Can you
24 recall having seen any study or information
25 that suggested that the public did not have

1 a high appreciation of what tar was?

2 A. I may well. I couldn't identify
3 a single source for it right now, seeing
4 information that would suggest that the
5 public couldn't give a really scientific or
6 chemical definition of tar, but that the
7 public understood that tar was a product of
8 cigarette smoke that was widely perceived by
9 health officials and many scientists as being
10 dangerous. I would say that information, in
11 its generic sense, was, in fact, broadly
12 available.

13 I don't think I have seen
14 anything that really disputes that contention,
15 but I do think it is possible that certainly
16 the public didn't have an expert's
17 understanding of tar. And I may have seen
18 some comment to that effect.

19 Q. We have talked about newspaper
20 articles and advertisements and such. Let me
21 just ask you some general questions about
22 your area of expertise. Are you an expert
23 in communications?

24 A. I am a historian, and historians,
25 as part of their expertise, have to be aware

1 and familiar with their strengths and
2 weaknesses of various forms of communication.
3 But I am aware that there are at least, at
4 some schools, academic disciplines and
5 communications. Some of them are evolutions
6 of schools and journalisms or additions to.
7 And, no, I am not an expert in that.

8 Q. How about psychology?

9 A. No, I am not a psychologist.

10 Q. Consumer behavior?

11 A. Well, again, I think it is
12 important to point out that the role of the
13 historian as to talk about what people do
14 and decisions people make has historical kind
15 of evidence, not the kind of evidence that
16 perhaps a psychologist would get by sitting
17 down and conducting a sort of clinical -- in
18 a clinical setting with a patient or that,
19 as I understand it, consumer behavior experts
20 would do by taking surveys and those sorts
21 of things.

22 So any comment I would offer in
23 those areas would be from the perspective of
24 a historian, not claiming a special expertise
25 in either psychology or consumer -- I forgot

1 exactly what you said, consumer something.

2 Q. Behavior.

3 A. Consumer behavior.

4 Q. How about marketing or
5 advertising, any expertise in there?

6 A. Certainly I am not an expert in
7 marketing. In advertising, advertising was
8 information that came into the public domain
9 that I certainly included in my analysis. I
10 tried to understand what -- how advertising
11 fit into the larger picture of information
12 that was available in the public, but I am
13 not an expert in advertising in that the
14 design of advertising campaigns, the
15 construction of specific advertisings would be
16 things that are not part of my expertise.

17 Q. I take it you are not an expert
18 in medicine?

19 A. No.

20 Q. Do you claim to have any
21 expertise in addiction?

22 A. Well, again, a public awareness of
23 the habit forming or addictive or the fact
24 that the nature of cigarettes or the fact
25 that cigarettes can be difficult to quit,

1 however you want to phrase that, is the
2 historical dimension of that awareness is
3 something I have studied and would offer
4 opinions on; however, I am not neither a
5 medical nor a psychiatric expert on
6 addiction.

7 Q. Your opinions relating to
8 addiction would be confined to the public's
9 awareness of it; is that correct?

10 A. That is correct, yes.

11 Q. I am looking for the disclosure.

12 A. My expert report, is that what
13 you are looking for?

14 Q. Yes. Thank you.

15 You mentioned some magazines, and
16 the ones you mentioned specifically by name
17 are Reader's Digest, Life, News Week, and
18 Time; is that correct?

19 A. Yes.

20 Q. Have you studied the demographic
21 profiles for the readership of those
22 magazines, in other words, what segments of
23 the population read those or subscribe to
24 them?

25 A. I have not undertaken a systematic

1 study of that; although, I certainly do have
2 some information about the level of
3 circulation and the raw numbers of
4 circulation and probably some impressionistic
5 data from other sources about the kinds of
6 people in households that read those kinds of
7 magazines.

8 Q. Would you have information on the
9 readership among teenagers, for example?

10 A. I don't recall having that
11 information, but I don't want to say
12 categorically that I don't have it at my
13 disposal. I don't recall it.

14 Q. Have you done any research on
15 what percentage of people who see a magazine
16 or see an article actually read the entire
17 article?

18 A. Again, other than to know from,
19 again, material that I encounter in my
20 research that certainly some people look at
21 titles and don't read the article and others
22 do read the entire article, so knowing that
23 there is a difference, yes. But I don't
24 have precise data on that question.

25 Q. Have you ever conducted any

1 research into that distinction of someone
2 just glancing at a headline versus reading an
3 article?

4 A. No, I have not.

5 Q. Do you know or have you done any
6 research on differences in reading habits
7 between adolescents and adults?

8 A. Again, I have seen some
9 information about that, but I have not
10 conducted a systematic research of that
11 question.

12 Q. Earlier I asked you about if you
13 had broken down the general public into
14 certain sub groups, and I mentioned
15 specifically teenagers. Let me ask you a
16 few other subcategories like that.

17 Have you considered what the
18 common knowledge or the common appreciation
19 of knowledge is to smokers versus
20 non-smokers?

21 A. Certainly I have seen breakdowns
22 dividing up the public into smokers and
23 non-smokers, and that is a category I
24 encountered in my research.

25 Q. Is this something you have seen

1 in polling data?

2 A. I have seen it in polling data
3 and in other kinds of surveys, yes.

4 Q. Any independent research on your
5 part in determining how a smoker might react
6 to information versus a non-smoker?

7 A. Well, again, I just need to be
8 clear with you. I think that certainly the
9 -- while as a general rule the same sort of
10 information, the same knowledge is available
11 to smokers and non-smokers. I am certainly
12 aware that sometimes they make different
13 decisions about that, and, yes, I have
14 studied that to some extent.

15 I haven't gone out and done any
16 independent -- as I think I indicated earlier
17 in the deposition, I haven't done any other
18 polling and would not do that. But in using
19 the work of people who have broken that
20 down, I have evaluated that, yes.

21 Q. I am especially curious to know
22 if you have done this considering some of
23 your other areas of expertise. Have you
24 broken the public down into regions of the
25 country like Southerners versus non-Southerners

1 in terms of their common knowledge?

2 A. I am trying to remember. I
3 believe I -- yes, I have seen some data
4 about region. I have seen some data about
5 occupation, you know, as well, which has a
6 sort of regional component to it.

7 Q. Again, is this polling data that
8 you have seen?

9 A. This is primarily, maybe not
10 exclusively, but primarily polling data that
11 I am referring to.

12 Q. Related to geography, how about
13 the public in tobacco producing states versus
14 non-tobacco producing states?

15 A. How about them with regard to
16 what?

17 Q. Had you done any studies or seen
18 any results of studies that suggest a
19 difference in the common knowledge of people
20 who reside in tobacco producing states versus
21 those who reside in other states?

22 A. Well, it actually has been one of
23 the sort of findings of my research, is that
24 health related -- that the related health
25 risks of smoking and the studies that are

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1 appearing on those are usually discussed even
2 more in more frequency and greater detail in
3 tobacco producing and manufacturing areas or
4 in states where tobacco is economically
5 important. They get not less coverage, but,
6 if anything, more.

7 It gets so much coverage
8 everywhere, it is hard to say that, but it
9 is certainly -- it certainly doesn't get any
10 less attention in those areas. And certain
11 types of stories are run even more frequently
12 in those areas than they do elsewhere.

13 Q. What type of story would be run
14 more frequently?

15 A. Well, for example, in South
16 Carolina and North Carolina newspapers, there
17 are stories in August of every year about
18 the opening of the tobacco markets. And
19 most of those stories, if they are coming at
20 a time when there has been a reasonably
21 recent study of some significance like an
22 American Cancer Society statistical study on
23 the health rates of smoking, will often
24 reference this latest information and raise
25 the issue of whether it will have an impact

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1 on the tobacco market that year; whereas, if
2 you are looking at a, say, Ohio or Detroit
3 newspaper, there is probably not going to be
4 that reference to the health risks of
5 smoking.

6 Q. Ohio is a big tobacco producing
7 state, isn't it?

8 A. I looked at some Ohio newspapers,
9 and I don't recall seeing those types of
10 stories. I may have missed them.

11 Q. Is it common knowledge among the
12 general public that filtered cigarettes are
13 safer than non-filtered cigarettes?

14 A. I would have to say that there
15 has been -- there was an abundance of
16 publicity on that very issue about whether
17 filtered cigarettes were, in fact, safer or
18 could be made to make cigarettes safer, and
19 there was a great deal of coverage and
20 discussion over it. And there was really
21 widespread disagreement among experts over
22 whether that was the case.

23 Some people who were very much
24 involved in medical research believe that
25 filters could be valuable. Again, not --

1 everybody would always state and did state
2 that it was better not to smoke at all, but
3 the Surgeon General commented on several
4 occasions in the 1950s that they had no
5 evidence that filters helped with regard to
6 the health risks. E. Collar Hammond of the
7 American Cancer Society was commented to that
8 effect as well. But there was a great deal
9 of discussion of that very issue. So it was
10 out there. But I don't believe that there
11 is evidence that that conclusion that you
12 stated was something that would be common
13 knowledge.

14 What you could say is that there
15 were people that were suggesting indeed their
16 filters were or could be, if they were
17 properly constructed, or constructed with that
18 end in mind.

19 Q. You would not say the conclusion
20 that filtered cigarettes are safer than
21 non-filtered has entered the common knowledge;
22 is that correct?

23 A. I would say that there is a great
24 deal of discussion in that question, and I
25 am not sure there was a consensus on what

1 the answer to it was.

2 Certainly that is true in late
3 1950s and into the 1960s. At some point the
4 question of filters also becomes intertwined
5 with other issues about lower tar as well.
6 So it becomes even more complicated.

7 Q. Let me ask you, in your opinion,
8 is there a consensus that cigarette smoking
9 can cause disease? Is there a consensus on
10 that?

11 A. Yes, there is.

12 Q. So the amount of information or
13 the quality or amount of information on that
14 is different than the quality or amount of
15 information on the filter question?

16 A. I don't think necessarily that the
17 key difference lies in amounts.

18 Q. Explain to me the difference.

19 A. It seems to me that there was a
20 lot of publicity about whether or not filter
21 tips were of any value in reducing the
22 health risks of smoking. And it is my
23 recollection, based on going through the
24 data, that probably the preponderance of that
25 evidence from medical and scientific people

1 was that there was no clear evidence that it
2 was -- that it did reduce the risks.

3 Certainly people like Ernest
4 Winder, who was one of the leading scientists
5 in the cancer and lung research, argued
6 repeatedly that he believed filters could be
7 constructed that would, in fact, help. And
8 people were, I think, aware of this.

9 But I don't believe that there
10 was a belief among the public that I could
11 argue from.

12 Q. Is the reason that you don't
13 conclude there is a consensus because you
14 encountered information on both sides of the
15 issue?

16 A. Well, it is not -- no. It is
17 certainly not simply that. I think, if
18 anything, over time there emerges the notion
19 that filters in and of themselves don't
20 reduce the risk of disease. And that was
21 not -- you were asking the question in the
22 other direction, and I was having to say --
23 having to give a different answer. The
24 public was certainly aware there were people
25 out there maintaining that filters either did

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1 or could reduce the risk, but that was not
2 something that they believed on a widespread
3 basis.

4 Q. Is it common knowledge among the
5 general public that low tar, low nicotine
6 cigarettes, are safer than regular cigarettes?

7 A. Once again, there was really,
8 since -- and most of the period I studied
9 and certainly from the mid 1950s on, a great
10 deal of discussion of this issue that since
11 potentially harmful ingredients in cigarettes
12 were often believed to be in cigarette tars,
13 that low tar cigarettes would be an
14 improvement. They would not protect your
15 health in a way that not smoking can help
16 it, but that it would be better if you were
17 going to smoke, it would be better to
18 consume less tar rather than more.

19 So, yes, there was a great deal
20 of public discussion about that. And from
21 the very beginning, people pointed out that
22 this, you know -- certainly initially it was
23 a logical proposition. It hadn't necessarily
24 been sustained. At least in the public
25 information, Ernest Winder maintained that it

1 would probably be true, but he admitted it
2 hadn't been substantiated by research, and
3 you can easily undermine the value of low
4 tar if you smoked more of low tar
5 cigarettes, that it was their consumption of
6 tar that mattered, not how much was in any
7 given cigarettes.

8 So all of that information was
9 abundantly discussed in the press in the late
10 1950s and 1960s.

11 Q. Was a consensus reached?

12 MR. KOETHE: I am going to object
13 to the form of that question.

14 THE WITNESS: I think the public
15 was broadly aware of the fact that many
16 people believe that reducing your tar intake
17 was, while it might be -- it might
18 contribute to reducing health risks, and
19 eventually that position is taken, I believe,
20 by official government entities.

21 So, yes, that was knowledge that
22 was out there and was broadly available to
23 the public.

24 Q. (By Mr. Evans) So if I heard
25 your answer correctly, many people believed

1 that many people were aware that low tar
2 cigarettes might be safer?

3 A. I didn't mean to -- I don't think
4 that is exactly what I said.

5 Q. Okay. Do you know what the term
6 compensation means in the context of low tar
7 cigarettes?

8 A. Again, with the caveat that I
9 don't claim to be a medical or scientific
10 expert on that, I do understand that if you
11 smoke low tar cigarettes, but smoke more than
12 you would have otherwise or otherwise have
13 inhaled more deeply, if things like -- there
14 are a variety of ways in which people can
15 compensate for low tar. And if they do
16 that, they have -- they are likely to negate
17 any reduction of risks that might be obtained
18 from simply smoking low tar cigarettes.

19 Q. This is a notion that compensation
20 would negate any reduction of risks. Is
21 that common knowledge, in your opinion?

22 A. Yes. It was widely discussed,
23 not necessarily using that terminology, as
24 early as the mid to late 1950s and continued
25 to be discussed through the 1960s. Again,

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1 Ernest Winder, who was one of the first
2 people to sort of bring this up, he was a
3 research scientist, cancer specialist. He
4 constantly argued for the value of a lower
5 tar value was quick to point out that people
6 couldn't take a cigarette that had half as
7 much tar as another and smoke twice as many
8 of them and be better off. So I think that
9 argument was widely in the press, widely
10 disseminated, permeated the media coverage of
11 that issue throughout this period, yes.

12 Q. Do you have a general opinion as
13 to what point in time you could describe it
14 as having entered the common knowledge?

15 A. Well, there certainly had been
16 some knowledge of it from almost the very
17 beginnings of the cigarette. One person as
18 far back as the 1890s was recommending
19 punching a hole in the filter of cigarettes
20 to let more air in to dilute the smoke
21 because that reduced the intake of what the
22 scientists believed were the hazardous
23 ingredients of cigarettes.

24 So there certainly has been -- I
25 don't want to imply that there had not been

1 some concern about that for a very long
2 time, but certainly beginning in the mid
3 1950s, I don't want to be off the top of my
4 head have to pick a particular year, as
5 there began to be discussions of the
6 possibility of reducing the amount of tar in
7 cigarettes as a way of reducing the health
8 risks, though certainly not eliminating them.
9 That issue got widespread coverage, and
10 people who were aware -- the awareness of
11 that was just as broad as the awareness of
12 the health risks because they were contained
13 in the same stories often.

14 Q. Do you know the procedure for
15 determining and reporting what tar and
16 nicotine levels of cigarettes are?

17 A. Could you be more specific?

18 Q. Well, do you know anything about
19 how you come up with the numbers that are
20 reported as levels of tar and nicotine for
21 cigarettes?

22 A. Well, again, I am not a technical
23 expert on this, but I am certainly aware
24 that different entities have attempted to do
25 this, and it has proven somewhat difficult to

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1 do. Private entities did it for magazines
2 like Consumer Reports and Reader's Digest.
3 The FTC, I believe it was, attempted to do
4 it to determine levels that could be made
5 known to the public.

6 But it generally involves the test
7 smoking of cigarettes by machines and
8 measuring quantities from that. And that
9 technique was described in detail in
10 newspaper and magazine articles as during the
11 period that I have been discussing.

12 Q. Well, would you consider that
13 method of determining tar and nicotine levels
14 to be common knowledge?

15 A. There was certainly a substantial
16 amount of publicity as to how that was done.

17 Q. Enough publicity that you would
18 conclude that that is in the common
19 knowledge?

20 A. It was certainly information that
21 was distributed widely in the public domain.

22 Q. Is it likely, if I were to walk
23 out on the street and find somebody, that I
24 would find somebody who could tell me how
25 tar and nicotine levels are measured in

1 cigarettes?

2 A. Again, that would be speculation
3 on my part about what kind of answers you
4 would get.

5 Q. But --

6 A. I could say that information was
7 certainly readily available in the 1960s in
8 newspaper articles discussing it.

9 Q. But if I understand it correctly,
10 sir, you are not only stating that the
11 information was available, but also giving
12 the opinion that is common knowledge, is that
13 correct?

14 A. I am certainly saying that the
15 information was distributed in the kinds of
16 -- in magazines and newspapers that kind of
17 the broad general public read on a regular
18 basis. And I think that exactly what sort
19 of detail people would be able to give, if
20 they were questioned in some detail about it,
21 is another issue; but it was not a process
22 that it was in any way not explained to the
23 public by the mass media. And that is what
24 I am saying.

25 Q. Have you seen any studies or

1 scholarly articles on the subject of the
2 public's awareness of tar and nicotine levels
3 in cigarettes? Again, I stress I am not
4 talking about the public's awareness of tar
5 in particular -- I said that wrong. I am
6 not talking about studies of the tar and
7 nicotine levels in cigarettes. I am talking
8 about studies of the public's awareness.

9 A. I have certainly seen some data
10 asking certain kinds of questions about those
11 issues and reporting public responses, and I
12 am not sure that I could cite them to you
13 off the top of my head, but I think that I
14 may well have seen some information like
15 that, but I couldn't tell you off the top of
16 my head where I have seen it.

17 Q. But you believe this is data that
18 supports your opinions about the common
19 knowledge?

20 A. Certainly I think that there is
21 nothing inconsistent in that data with my
22 opinion that low tar cigarettes and their
23 potential value as reduction in health risks
24 was widely discussed in the public in the
25 late 1950s and 1960s.

1 Q. If someone said in 1972 that
2 there is low awareness of tar and nicotine
3 levels in cigarettes and no comprehension of
4 what those numbers mean, you would disagree
5 with that statement, I take it?

6 A. Well, let me try to explain that.
7 I certainly think that, you know, the public
8 is not going to have an expert's level of
9 knowledge if they are not going to be able
10 to maybe tell you exactly what some number
11 regarding tar and nicotine means. What I
12 think the public knows is that there exists
13 a substantial volume of information out there
14 suggesting -- not everybody agrees with it,
15 but suggesting that lower tar cigarettes may
16 be -- may reduce the health risks of smoking
17 to some degree, and that the measures of
18 them can allow you to distinguish low tar
19 brands from higher tar brands. That is the
20 information that I believe the public is
21 widely available in.

22 I think you can ask the public
23 all sorts of more technical questions. And
24 I don't know that I have the information at
25 my disposal to know how much of that kind of

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1 information; but in terms of the sort of
2 basic core information, is it conceivable
3 that low tar cigarettes can reduce health
4 risks if you don't smoke more of them or
5 smoke them differently than you smoked other
6 cigarettes? Yes, there is abundant
7 information out there if they are aware of
8 it, and that they knew that the numbers
9 which they -- when they had numbers available
10 to them, from whatever source, will enable
11 them to identify the low tar brands and
12 compare tar levels across cigarettes as they
13 were measured by whatever entity did that
14 measure.

15 Q. So a study from the 70s that said
16 the public has no comprehension of what tar
17 and nicotine levels means, that would be
18 inconsistent with what you have learned?

19 A. Well, again, it depends on what
20 you would mean by comprehension. I think
21 that there was certainly probably aspects
22 about tar levels, you know, that the public
23 was not going to be able to understand or
24 explain very well; but I think those basic
25 propositions that I have stated a couple of

1 times now the public was aware of and had
2 good information about.

3 Q. Did the tar and nicotine numbers
4 that are published regarding smoke, do they
5 measure the content of the cigarettes or the
6 delivery of the cigarettes?

7 A. It is certainly my recollection
8 that those figures were determined by -- in
9 most of the instances that I am aware of,
10 which was research that was done for Reader's
11 Digest, for Consumer Reports, and by a FTC
12 approved process, involved, you know, actually
13 having machines smoke the cigarettes and
14 collect the tars.

15 Q. So does the distinction of my
16 question have any meaning to you, the content
17 of the cigarette versus the delivery of the
18 cigarette?

19 A. I am not sure that it does.
20 That is why I tried to give you the answer
21 as I understood it without using either one
22 of those terms to avoid confusion.

23 Q. Then I take it you wouldn't be of
24 the opinion that it is common knowledge, the
25 distinction between tar content or tar

1 delivery of a cigarette?

2 A. Certainly as you have just stated
3 it there, I am not sure that that is a way
4 in which it was generally expressed in the
5 period that I have done the most research
6 on.

7 What was, I think, known, and as
8 I already indicated, that an individual
9 person's actual intake of tar depended on how
10 many cigarettes they smoke, how deeply they
11 inhaled, if, whether they did anything, they
12 altered the cigarette in any way to prevent
13 more air from getting in or something like
14 that.

15 They were certainly aware that
16 there were ways that any potential advantages
17 of low tar cigarettes could be circumvented,
18 that was widely publicized. I am just not
19 as familiar with the terminology that you
20 seem to be using here.

21 Q. I believe you stated earlier that
22 you had not considered any documents or
23 reports generated by tobacco manufacturers
24 that were not made available to the public;
25 is that correct?

1 A. That is, to the best of my
2 recollection, correct, yes.

3 Q. So is it true that you have not
4 considered any documents that might have
5 described the way that a tobacco manufacturer
6 was attempting to counter information on the
7 ill effects of tobacco?

8 A. Again, as I said, the information
9 that I have considered was information that
10 came into the public domain. Some of these
11 stories or reports included analyses written
12 by journalists for the most part of at least
13 what their perception of the industry's
14 response was. But I have not reviewed any
15 internal -- any kind of company documents
16 and, therefore, on the basis of my opinion,
17 I -- and, therefore, I have not -- unless
18 the document came into the public domain or
19 was written about in the public domain, it
20 was not part of the body of information I
21 used to base my opinions on.

22 Q. You don't consider that to be
23 important information that you needed to form
24 the opinions yourself?

25 A. My opinion, my area of my

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1 research, was on common knowledge, what the
2 public is aware of. You know, almost by
3 definition I am interested in the information
4 that reaches the public, the result of the
5 process, not any process that produces that
6 information.

7 Q. Let me ask you about an ad that
8 did appear that was disseminated to the
9 public, and ad by the Tobacco Institute which
10 bore the headline The Question About Smoking
11 and Health Is Still a Question.

12 Do you recall having seen an
13 advertisement like that?

14 A. Can I see it? I would say that,
15 yes, I do believe I have seen this
16 advertisement, or certainly -- this doesn't
17 have a date but not an exact source where it
18 reached the public domain. It says reprinted
19 from the Washington Post. I believe I have
20 either seen this or seen one very close,
21 very similar to it.

22 Q. If I could have that. I just
23 want to ask you a question about that
24 headline, The Question About Smoking and
25 Health Is Still A Question. Let me

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1 represent to you the date that this document
2 indicates that this was published was
3 December 1, 1970.

4 As of 1970, do you agree or
5 disagree with the sentence that is the
6 headline of this ad, The Question About
7 Smoking and Health Is Still A Question?

8 MR. KOETHE: I am going to object
9 to that question. Again, I guess -- I am
10 going to object if you are asking for an
11 expert opinion from this witness on the
12 meaning of that statement.

13 Q. (By Mr. Evans) Well, I am going
14 to ask my question because I think it seems
15 to me to pertain to your area of expertise.

16 Do you agree or disagree with the
17 headline that reads The Question About
18 Smoking and Health Is Still A Question?

19 A. Well, again, I will have to
20 answer it with the caveat that I am not a
21 medical doctor or a scientist who could
22 answer a question about causation one way or
23 the other.

24 What I can say is that certainly
25 at that point the opinion expressed in that

1 headline is not the -- it is unusual in the
2 public media. But I think if you look at
3 the substance of it beneath the headline, it
4 maintains the position, which was, in fact,
5 reported fairly regular, that in -- and I
6 believe by some people other than the Tobacco
7 Institute -- that the cause and effect
8 mechanism between smoking and disease had not
9 been discovered, that statistical data
10 overwhelmingly showed that there were
11 significant health risks of smoking, that
12 smoking shortened lives; but they made a
13 distinction between health risks and
14 causation.

15 And that was something that was
16 well publicized, yes. But I have not -- I
17 can't medically or scientifically say that,
18 whether I agree or not --

19 Q. Whether you would agree or not.

20 A. Whether I agree or disagree with
21 the expertise. But it was not -- it was an
22 unusual -- it was -- and, of course, it
23 wasn't a headline as an advertisement.

24 Q. Do you recall in your survey of
25 articles and news reports, coverage of the

1 publications of the 1979 Surgeon General's
2 report?

3 A. I recall coverage of it. I don't
4 recall a great deal of specifics about the
5 coverage of it. The focus of my research has
6 been on 1969 and earlier, and I have done
7 some research, as I said, in the 1970s and
8 80s, and I recalled some publicity, fairly
9 considerable publicity, not about that report,
10 but about the activities of Joe Califano in
11 the care of the Secretary of Health,
12 Education, and Welfare in this period of '78
13 and '79.

14 So, yes, I do recall that there
15 was a lot of publicity. The details of it
16 I don't recall as readily off the top of my
17 head.

18 (A recess was taken.)

19 THE WITNESS: The defense counsel
20 sent me one deposition in addition to those
21 I mentioned earlier. It was the deposition
22 of Kathy Bates, I believe.

23 Q. (By Mr. Evans) All right. Dr.
24 Ford, from our earlier discussion of tobacco
25 industry documents that you had seen or not

1 seen, you made clear you had seen those
2 things that may have been disseminated to the
3 public but not internal documents, have I
4 characterized that correctly?

5 A. Yes, essentially.

6 Q. Is it true then that you are not
7 going to testify one way or the other on
8 whether the defendants in this case tried to
9 influence or shape common knowledge?

10 A. Well, my testimony will be about
11 common knowledge and how the information that
12 came into the public domain did shape public
13 awareness and common knowledge. And since
14 some of the information that came into the
15 public domain did, in fact, come from the
16 companies, I couldn't agree with the
17 proposition as you stated it.

18 Q. So to the extent that publicly
19 available documents from tobacco companies may
20 have shaped the public knowledge, you will
21 testify as to that, correct?

22 A. Yes, that is correct.

23 Q. But if there were internal
24 documents that discussed attempts, successful
25 or unsuccessful, attempts to influence or

1 shape common knowledge, you won't be
2 discussing those; is that correct?

3 A. I could only discuss what actually
4 came into the public domain and what public
5 awareness and response was.

6 Q. Did you consider the effect of
7 cigarette advertising in formulating your
8 opinions on common knowledge?

9 A. Cigarette advertising was
10 information that was in the public domain,
11 and it was included in the material that I
12 reviewed, yes.

13 Q. When you reviewed articles in
14 magazines, for example, did you also take
15 into consideration how many cigarette
16 advertisements were in that given issue of
17 that magazine?

18 A. Yes. As we looked, as we
19 searched for articles and other information,
20 we tried to be aware -- consider advertising
21 that were in those same publications.

22 Q. So this would be an instance of
23 where you looked at the entire magazine as
24 opposed to those occasions where one of your
25 research assistants merely copied the article;

1 correct?

2 A. That is correct. That is
3 correct.

4 Q. Is it reasonable to conclude, Dr.
5 Ford, that the defendants in this case had
6 access to any information that the general
7 public had access to?

8 A. Yes. I think that is -- my
9 definition was public information. Cigarette
10 manufacturers had information to public
11 information just as everybody else did.

12 Q. Would you conclude, therefore,
13 that they were aware of the risks of
14 cigarette smoking at least at the same time
15 as the general public was aware of those
16 concerns?

17 A. Again, as you state in your same
18 question, all of the information that I have
19 evaluated came into the public domain. And
20 while I don't have -- as I indicated, I
21 haven't attempted to look inside the
22 companies, but certainly it was out there.
23 It was public information. It was knowledge
24 that the companies had access to, yes.

25 Q. Do you believe that the defendant

1 cigarette companies and the executives had
2 greater or more sophisticated knowledge
3 regarding cigarettes in general than the
4 average citizen would?

5 A. That wouldn't be a question I
6 could answer based on the research that I
7 have done.

8 Q. You said earlier, I believe, that
9 there is now a consensus in the general
10 public that cigarette smoking causes disease.

11 A. I don't recall actually whether I
12 said exactly that or not, but I would
13 certainly agree with the proposition that the
14 public is well aware now and has been for a
15 very long time that there are significant
16 health risks of smoking which include life
17 threatening, life shortening diseases.

18 Q. At what point in time should the
19 defendant cigarette companies have recognized
20 the consensus that cigarette smoking causes
21 disease?

22 A. I don't -- again, I don't know
23 that I can answer that question as you
24 phrased it because it would call on me to
25 speculate about people who I haven't

1 researched; but certainly there has long
2 been, really from the moment that cigarettes
3 began, mass production, as we talked about
4 this morning, of widespread information to
5 the general public that they were a health
6 hazard and shortened life.

7 Some of the specific nature of
8 that information has evolved over time, but
9 it long has been out there. And certainly
10 cigarette makers have had access to that
11 information.

12 Q. Well, if we charge a member of
13 the general public with knowledge that
14 cigarette smoking causes disease at a certain
15 point in time, shouldn't we at least at that
16 point in time also charge the cigarette
17 manufacturers with that same knowledge?

18 MR. KOETHE: Object to the form
19 of the question.

20 THE WITNESS: Well, I am
21 certainly saying that cigarette manufacturers
22 are part of the general public, and the
23 general public has been aware of this health
24 risk, and that they would be included in my
25 statement that the health risks of cigarette

1 smoking were well known.

2 Q. (By Mr. Evans) Dr. Ford, if the
3 president of a tobacco company gave testimony
4 in 1980 that cigarettes are not injurious to
5 health, would that testimony be at odds with
6 common knowledge?

7 A. If that occurred, that would, in
8 fact, in my opinion, be at odds with common
9 knowledge of the health risks of smoking.
10 There might be details in that testimony that
11 could explain that difference, but it would,
12 as simply as you stated it, appear to be at
13 odds with the fact that by that time the
14 health risks of smoking were certainly very
15 widely known.

16 Q. Well, could there have been, in
17 1980, an honest disagreement or an honest
18 difference of opinion on that as far as
19 being injurious --

20 A. I think you might be asking for a
21 scientific or medical conclusion that is
22 beyond my expertise, as I understand the
23 question.

24 Q. Let me show you an article and
25 have the court reporter mark this, please.

1 (Plaintiff's Exhibit-10 was marked
2 for identification.)

3 Q. (By Mr. Evans) I will ask you
4 to take the time you need to look this over,
5 but I do want to ask you if you are
6 familiar with this article.

7 A. What was the question?

8 Q. Are you familiar with this
9 article?

10 A. Yes, I have seen it. I am
11 familiar with it.

12 Q. Let me just state for the record
13 this is a copy of an article from the
14 Columbia Journalism Review dated summer 1963.
15 The headline is Smoking and News, Coverage of
16 a Decade of Controversy.

17 In the italicized subheading, it
18 says, it poses the question, Has American
19 Journalism given a full, fair, and
20 intelligent account of the complex debate
21 over the effects of smoking on health. Have
22 I read that correctly?

23 A. Yes.

24 Q. This article gives, basically, an
25 analysis of news coverage between 1953 and

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1 1963, and it does come to some conclusions.
2 I would like you to turn to the last page
3 of the article, the last column states,
4 Conclusions, and about halfway down it says,
5 To the questions posed at the begin of this
6 article, the answers would appear to be, and
7 then it says No. 1.

8 Would you read the paragraph
9 marked No. 1 there?

10 A. The beginning coverage?

11 Q. Yes.

12 A. Coverage has been sufficiently
13 fragmented, uneven and affected by publicity
14 efforts on both sides to cause confusion.
15 An important place for clarifying confusing
16 needs, the editorial page, has been little
17 used. Only a few individual organizations
18 have come close to giving the issue with the
19 kind of in-depth accounting that would seem
20 to be owed the public. Here journalism has
21 failed to assume the kind of initiative that
22 it has shown in many other issues of public
23 health.

24 Q. Let me ask you, Dr. Ford, based
25 on your research and the opinions are you

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1 offering today, would you disagree with the
2 conclusions reached in this article?

3 A. I would certainly disagree with
4 the one I just read, yes.

5 Q. Would you agree that an analysis
6 done in 1963 of the period '53 to '63 is a
7 more contemporaneous review than one
8 undertaken in the 1990s?

9 A. Yes, it certainly was done, and
10 this one was done in the 1960s, certainly.

11 Q. I would like to show you another
12 article and have the reporter mark this,
13 please.

14 (Plaintiff's Exhibit-11 was marked
15 for identification.)

16 Q. (By Mr. Evans) Let me state for
17 the record, this is a book entitled
18 Cigarettes, What the Warning Label Doesn't
19 Tell You. It is subtitled The First
20 Comprehensive Guide to the Health Consequences
21 of Smoking. The copyright date is 1996.
22 And I have copied through the forward of
23 this text rather than bringing the entire
24 book.

25 First of all, let me ask you if

1 you are familiar with this book.

2 A. To the best of my recollection, I
3 have not seen it.

4 Q. Are you familiar with the American
5 Council on Science and Health?

6 A. Yes, I am. I don't have -- I
7 can't give you a great deal of information
8 about it, but I believe that it is an
9 organization, maybe even a for-profit
10 organization, in which a person who has
11 served as an expert for plaintiffs in other
12 similar cases plays a large role; but I
13 don't know a great deal to tell you about
14 it.

15 Q. Do you have an opinion that the
16 American Council on Science and Health is in
17 any way aligned with the plaintiff's bar, so
18 to speak?

19 A. All I know is that Elizabeth
20 Whelan has testified for the plaintiffs in
21 cases, but I wouldn't make that statement in
22 fact.

23 Q. I would just like to refer you to
24 some language on page Roman Numeral VIII in
25 the forward.

1 A. I am on Roman Numeral VIII.

2 Q. Read from the second sentence at
3 the top of this page.

4 A. ACSH believes that in 1996,
5 American smokers and non-smokers alike have
6 the most cursory understanding of the extent
7 and magnitude of the health risks associated
8 with cigarette smoking as compared with other
9 alleged health risks in the environment.

10 Q. Let me ask you, based on your
11 research and the opinions you are offering
12 today, would you disagree with the conclusion
13 or the statement in the forward to this text
14 that you just read?

15 A. Based on the information I have
16 here, I strongly disagree in it. In 1996,
17 Americans are not overaware of it, but
18 overwhelmingly believe in the 97 percent that
19 cigarette causes lung cancer and that lung
20 cancer can kill you. Those are the
21 significant and pertinent pieces of
22 information, and I think the public is
23 extraordinarily well informed about them.

24 Q. And this is not a book you have
25 reviewed or plan to rely on for the

1 testimony you are giving in this case, is
2 that correct?

3 A. I have not reviewed it, and it
4 certainly doesn't seem like one I would rely
5 on. I may review it, however, since you
6 have called it to my attention.

7 MR. EVANS: I think I am just
8 about finished. If you can, give me a
9 two-minute break to look over my notes.

10 MR. KOETHE: Sure.

11 THE WITNESS: Can I ask counsel a
12 question about one of my answers? Is that
13 permitted?

14 MR. EVANS: The simple answer to
15 that is no, but I don't want to --

16 THE WITNESS: Can I clarify? I
17 think that --

18 Q. (By Mr. Evans) Please, if there
19 is any answer you want to add to or clarify
20 in any way, you certainly may do that.

21 A. I may have answered this
22 accurately already. I believe you asked me
23 early in the questioning today if the number
24 of hours I gave you that I worked in 1999
25 included any case I consulted with or just

1 the two trials that I was involved in, and
2 the answer I intended to give was yes, the
3 figure I gave you included everything. And
4 I got concerned that maybe that was not the
5 answer I gave. If it is, my previous answer
6 was accurate. But the fact is that everything
7 was embraced in that figure I gave you.

8 Q. I appreciate that clarification.
9 I think that may have been the way you
10 answered it.

11 A. Okay.

12 Q. Let me just follow up by saying
13 you had given me a total estimation of about
14 350 hours of work done for 1999; is that
15 correct?

16 A. Between 300 and 350, and that
17 would embrace both Ingle and Gilboy and any
18 other cases that I consulted with.

19 Q. So that would be the total period
20 of work done?

21 A. That would be the total period of
22 work done.

23 Q. Thank you for clarifying that.

24 (A recess was taken.)

25 MR. EVANS: All right. I have

1 no further questions for you, Dr. Ford. I
2 appreciate your time. It was a pleasure to
3 meet you and speak with you.

4 MR. SINGLETON: We have no
5 questions.

6 MR. KOETHE: No questions here
either.

8 (Deposition concluded.)

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HUMPHREY

1 STATE OF GEORGIA:

2 COUNTY OF FULTON:

3 I hereby certify that the foregoing
4 transcript was reported, as stated in the
5 caption, and the questions and answers
6 thereto were reduced to typewriting under my
7 direction; that the foregoing pages represent
8 a true, complete, and correct transcript of
9 the evidence given upon said hearing, and I
10 further certify that I am not of kin or
11 counsel to the parties in the case; am not
12 in the employ of counsel for any of said
13 parties; nor am I in anywise interested in
14 the result of said case.

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15 My commission expires on the
16 17th day of March, 2001.

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CAPTION

The Deposition of Lacy K. Ford,
Ph.D., taken in the matter, on the date, and
at the time and place set out on the title
page hereof.

It was requested that the deposition
be taken by the reporter and that same be
reduced to typewritten form.

It was agreed by and between counsel
and the parties that the Deponent will read
and sign the transcript of said deposition.

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Deposition of Lacy K. Ford, Ph.D. - March 24, 2000

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CERTIFICATE

1
2 STATE OF :
3 COUNTY/CITY OF :

4 Before me, this day, personally
5 appeared, Lacy K. Ford, Ph.D., who, being
6 duly sworn, states that the foregoing
7 transcript of his/her Deposition, taken in
8 the matter, on the date, and at the time and
9 place set out on the title page hereof,
10 constitutes a true and accurate transcript of
11 said deposition.

12
13 Lacy K. Ford, Ph.D.
14

15 SUBSCRIBED and SWORN to before me this
16 day of , 2000 in the
17 jurisdiction aforesaid.

18
19 My Commission Expires Notary Public
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Deposition of Lacy K. Ford, Ph.D. - March 24, 2000

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RE: Alexander Gallo & Associates
File No. 1062
Case Caption: Little v Brown & Williamson
Deponent: Lacy K. Ford, Ph.D.
Deposition Date: March 24, 2000

To the Reporter:

I have read the entire transcript of my
Deposition taken in the captioned matter or
the same has been read to me. I request
that the following changes be entered upon
the record for the reasons indicated. I
have signed my name to the Errata Sheet and
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to attach both to the original transcript.

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FORD, Ph.D., LACY K.

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similar - surrounding

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55.5	60.21	68.2	146.24	147.7	147.18	southern (2)	25.8	147.12	154.25	159.21	35.7	86.15	86.18
148.11	153.15	160.21	148.8	148.11	148.12	42.19		160.13			88.17	90.5	90.20
similar (9)	24.13		152.14	153.10	153.16	Southerners (1)	126.25	statements (4)	45.1		93.6	97.16	97.17
30.8	30.9	30.12	153.20	154.14	155.1	Spalding (4)	2.14	47.10	49.22	72.10	112.9	119.24	124.1
32.9	89.14	98.24	155.9	155.14	156.15	3.20	3.23	64.3			128.21	128.22	142.15
146.21	159.12		156.21	158.21	160.8	speak (2)	159.18	status (19)	1.1		studying (1)		23.5
simple (3)	100.25		social (1)	26.11		163.3		19.9	30.21	31.1	sub (3)	112.7	112.18
101.3	161.14		society (7)	40.10		special (5)	56.22	31.11	31.22	32.21	subcategories (1)		125.14
simply (10)	6.19		46.25	90.16	93.6	75.17	76.10	35.9	35.13	68.4	125.16		
8.22	14.18	59.17	115.1	128.22	130.7	121.24		96.24	114.22	127.13	subheading (1)	156.17	
67.6	73.9	112.14	solely (1)	21.23		specialist (1)	136.3	127.14	127.20	127.21	subject (7)	7.17	
132.17	135.18	155.12	someone (4)	56.11		specialty (2)	59.18	128.4	157.3	167.6	19.17	25.19	27.25
single (1)	120.3		71.5	125.1	141.1	specific (25)	6.16	stating (1)	139.10		38.19	67.8	140.1
Singleton (4)	2.20		sometimes (4)	28.20		18.4	22.18	statistical (5)	100.11		submit (1)	13.16	
3.16	3.18	163.4	78.7	94.10	126.12	35.22	37.7	101.1	101.3	128.22	submits (1)	29.16	
sister (2)	8.4	83.24	somewhat (2)	26.7		60.23	60.24	148.9			submitted (1)	107.14	
sit (4)	15.45	75.21	sophisticated (1)	153.2		69.6	71.9	Steven (2)	8.5		subscribe (2)	102.19	
95.18	113.7		53.2			79.14	80.4	84.1			123.23		
sitting (1)	121.16		sorry (5)	36.18	66.23	98.21	110.7	Stewart (2)	2.13		SUBSCRIBED (1)		
six (2)	10.16	10.20	81.2	93.14	111.3	112.9	112.14	3.19			167.15		
10.21			sort (32)	17.17		116.3	122.15	stick (1)	118.8		subscription (1)	39.13	
size (1)	74.24		26.21	28.20	32.8	154.7		still (6)	60.17	81.20	substance (1)	148.3	
skills (1)	17.14		32.15	34.23	36.16	specifically (27)	5.17	146.11	146.25	147.7	substances (1)	116.3	
skip (1)	38.6		36.21	38.21	39.20	3.25	8.13	147.18			substantial (3)	109.9	
slight (1)	46.2		42.5	43.18	43.1	9.19	21.5	stipulation (1)	98.22		138.15	141.13	
slightly (1)	17.16		47.11	48.19	48.19	30.14	30.25	stood (1)	40.14		substantiated (1)		
small (1)	38.4		54.10	58.15	59.3	43.21	45.20	stop (1)	52.23		134.2		
smaller (1)	26.7		71.9	73.2	73.17	69.1	86.4	stopped (1)	40.14		substitute (1)	17.23	
smoke (2)	54.11		74.3	78.7	82.23	96.13	103.2	stopping (1)	119.15		subtitled (2)	98.3	
54.21	54.35	55.7	83.20	84.15	84.15	104.22	104.24	stories (10)	57.8		158.19		
115.15	117.24	118.2	84.24	85.17	88.1	105.9	105.16	57.16	57.21	58.9	successful (1)	150.24	
118.15	120.8	130.2	88.4	90.3	90.19	123.16	125.15	58.10	58.12	59.1	successor (1)	1.8	
133.17	135.11	135.11	88.22	90.21	102.10	specific (1)	149.4	59.4	59.7	74.2	such (4)	35.1	43.19
136.7	138.20	142.4	105.6	105.15	106.11	specified (1)	112.16	76.1	76.16	78.2	88.17	88.24	91.7
142.5	143.4	143.13	114.25	116.23	116.17	speculate (1)	153.25	128.11	128.17	128.19	120.20		
144.10			117.9	121.17	126.9	speculation (2)	55.15	129.10	137.13	145.11	sufficiently (1)	157.12	
smoked (2)	134.4		127.6	127.33	136.2	139.2		story (2)	57.22		suggest (5)	38.1	
142.5			139.18	142.1		speed (1)	108.21	58.3	58.4	58.16	44.3	94.21	120.4
smoker (2)	15.25		sorts (2)	121.20	141.23	spend (1)	50.8	58.22	76.21	77.4	127.18		
126.5			sound (1)	53.6		spent (4)	61.10	77.10	77.13	77.24	suggested (2)	78.22	
smokers (1)	33.12		source (6)	21.13		62.8	66.7	78.10	79.1	79.17	80.6	119.25	
44.14	53.22	59.6	21.13	21.24	22.1	72.14		81.15	81.17	109.22	suggesting (2)	130.15	
125.19	135.22	126.11	39.18	43.2	44.4	spite (1)	54.25	109.25	110.3	110.6	141.14	141.15	
160.5			46.17	92.22	93.25	split (1)	48.23	110.8	128.13		suggests (2)	113.23	
smoking (1)	13.23		96.8	101.8	120.3	spring (1)	66.11	straightforward (1)	90.3		118.23	118.25	
33.9	53.23	34.20	142.10	146.17		Staff (1)	98.4	street (2)	1.19	2.15	summary (1)	75.23	
37.17	38.1	41.9	sources (14)	21.9		stand (2)	102.25	2.23	59.5	138.23	summer (2)	66.12	
43.4	44.12	47.18	21.20	22.16	23.17	standard (4)	56.15	strong (1)	121.1		156.14		
48.14	49.1	49.25	23.20	25.15	26.22	79.11	165.5	strongly (1)	140.3		Summons (1)	108.18	
50.15	51.1	51.19	27.19	28.2	34.14	standards (1)	101.15	students (2)	114.22		Sunday (1)	83.6	
52.1	52.24	53.12	35.20	36.3	38.7	standing (1)	84.25	35.18	36.15	36.23	SunTrust (2)	1.18	
53.14	53.19	54.8	43.10	43.12	44.22	start (1)	27.13	70.5	70.15	100.25	2.22		
54.14	54.15	55.4	45.3	45.18	47.5	started (1)	114.6	113.24			supervised (1)	36.5	
55.25	57.23	57.25	47.12	52.23	60.1	state (2)	22.7	studied (4)	123.3		supports (2)	78.17	
58.6	59.8	60.12	79.7	81.24	82.3	22.23	34.12	123.20	126.14	133.8	suppose (2)	46.3	
60.19	60.21	62.21	82.8	83.9	83.18	35.12	37.16	87.8	87.9	87.12	80.10		
66.10	68.23	69.2	94.23	99.13	103.25	38.12	38.16	87.14	87.22	87.23	Surgeon (16)	48.10	
73.6	78.10	80.5	109.22	112.3	124.5	40.12	41.2	92.14	112.6	114.3	49.4	93.21	93.23
87.16	88.7	89.21	south (29)	1.1		43.5	47.17	116.5	118.22	118.24	93.24	95.9	95.13
90.6	90.10	93.2	2.8	3.9	6.14	129.7	130.1	127.17	127.18	127.25	95.16	96.4	96.17
93.9	96.6	98.1	16.25	17.7	18.18	164.1	167.2	139.25	140.6	140.8	97.5	104.6	104.14
101.10	101.19	112.11	19.2	19.3	19.11	state-wide (1)	39.8	study (16)	18.8		104.16	130.3	149.1
113.9	113.16	113.21	20.15	21.6	22.19	statement (1)	50.2				surrounding (2)	20.15	
114.4	114.6	114.10	25.11	26.12	27.2	53.9	72.10						
114.13	114.16	115.4	27.9	27.10	35.9	80.17	91.6						
115.10	119.15	127.25	37.11	40.11	41.24								
128.23	129.5	131.8	42.15	65.17	68.1								
131.22	133.15	135.18	69.12	70.6	70.20								
138.7	141.16	146.10	128.15										

78.2		75.14	75.15	75.17	106.20	106.21	107.9	Traditionally (1)	17.11	20.2	25.7
survey (4)	42.19	76.2	76.8	76.16	threatening (1)	153.17		83.10	26.10	29.14	164.6
53.11	97.8	76.18	76.21	76.22	three (4)	16.24	71.11	tragic (1)			
surveyed (1)	37.1	76.23			73.19	103.25		trained (1)	99.16	19.6	19.15
surveyors (1)	90.11	telling (1)		52.2	through (1)	13.11		training (6)	17.25		
surveys (7)	96.21	ten (1)	76.4		22.5	22.6	44.19	18.4	18.10	100.14	
96.21	96.23	tend (2)	21.23	43.4	45.2	45.17	47.4	100.25	102.8		
97.2	121.20	Tennessee (1)		75.16	52.14	103.1	103.5	transcript (7)	164.4		
sustained (1)	133.24	tenured (1)		100.12	131.23	135.25	158.22	164.8	166.11	167.7	
Suzanne (2)	1.3	term (3)	71.13	118.8	throughout (4)	33.8		167.10	168.10	168.17	
78.14		135.5			37.10	56.24	136.11	transition (1)	78.7		
Suzie (3)	8.2	termed (1)		48.16	times (7)	28.12	53.21	tremendous (1)	64.9		
83.2		terminology (2)	135.23		68.4	79.19	83.6	trend (1)	55.6		
Suzie's (1)	83.12	144.19			86.10	143.1		Trends (1)	96.5		
sworn (4)	3.4	terms (13)		9.3	tips (1)	131.21		trial (7)	14.3	14.13	
80.16	167.6	18.9	51.8	62.7	title (5)	19.21	42.20	14.18	62.5	63.18	
syndicated (1)	59.20	66.3	66.6	107.12	97.20	166.4	167.9	65.6	65.20		
systematic (5)	86.18	109.18	111.19	118.16	titled (2)	12.4	96.5	trials (1)	162.1		
87.22	88.2	127.1	142.1	143.22	titles (1)	124.21		tried (7)	6.17	43.14	
125.10		test (1)	138.6		tobacco (7)		1.7	46.25	94.22	122.10	
systemic (3)	46.10	testified (5)	3.5		1.9	1.9	2.10	143.20	150.8	151.20	
90.20	91.9	159.20		109.10	2.18	3.18	14.12	true (7)	25.2	131.2	
taking (6)	44.10	testify (1)	30.19		30.20	30.20	31.21	134.1	145.3	150.6	
50.10	78.15	31.7	33.8	55.21	33.2	46.15	46.23	164.8	167.10		
765.3	165.11	79.2	81.16	110.15	47.3	47.8	47.22	try (6)	27.18	35.16	
tar (50)	118.8	111.13	112.5	150.7	48.7	61.7	62.3	73.23	75.25	97.6	
319.4	119.13	119.15			62.7	62.10	63.23	141.6			
319.16	119.18	120.1			67.23	67.24	68.1	trying (6)	45.6		
120.6	120.7	120.17			68.6	68.18	69.8	81.4	94.21	103.22	
131.5	133.5	133.13			69.13	89.3	89.11	110.11	127.2		
133.18	134.4	134.4			89.16	90.21	91.4	turn (5)	5.5	5.7	
134.6	134.16	135.1			91.12	91.15	92.2	10.5	47.13	157.2	
135.6	135.11	135.15			92.5	92.12	92.15	turned (1)		104.15	
135.18	136.5	136.7			97.8	103.9	103.21	Turning (1)	33.6		
137.6	137.15	137.20			104.2	104.3	104.9	turns (1)	22.5		
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140.4	140.2	140.23			116.12	116.17	116.21	32.19	41.8	41.23	
141.2	141.11	141.15			117.4	117.6	118.12	42.9	43.6		
141.18	141.19	142.3			118.13	119.8	127.13	twice (1)	136.7		
142.11	142.12	142.16			127.20	128.3	128.4	two (1)	17.21	19.1	
142.22	143.3	143.25			128.18	129.1	129.6	32.18	42.22	46.21	
143.25	144.9	144.17			144.23	145.5	145.7	57.21	71.2	71.3	
tars (7)	115.24	115.25			146.9	148.6	149.24	71.10	73.7	73.18	
318.4	118.13	118.23			150.19	155.3		96.20	97.14	97.15	
133.12	143.14	161.8			today (23)		4.16	100.8	103.25	104.13	
taught (10)	19.16	161.8			5.2	5.24	6.21	113.13	162.1		
39.20	20.1	36.10			7.12	8.25	9.6	two-minute (2)	77.25		
36.15	36.23	37.8			13.17	14.12	14.22	161.9			
38.2	100.12	100.21			15.17	15.23	31.10	two-part (2)	92.16		
teach (3)	19.23	158.23	160.13		31.14	31.19	39.19	101.24			
21.2		158.23	160.13		39.25	40.16	43.11	type (7)	37.4	58.2	
teacher's (1)	35.6	textbook (2)	35.17		95.14	158.1	160.12	58.3	67.16	68.24	
teachers (2)	36.4	36.22			161.23			82.11	87.16	101.17	
36.5		textbooks (4)	35.10		together (1)		98.2	128.13			
teaching (7)	17.6	35.12	37.5		too (2)	19.13	28.4	types (6)	22.9	57.21	
18.17	18.21	textile (1)	42.15		76.6			58.22	82.20	128.11	
19.1	19.7	Thank (7)	6.22		took (5)	10.7	22.21	129.9			
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125.15		thereto (1)	164.6		91.2	100.1		117.10			
telecast (1)	77.14	theses (1)	101.2		total (6)	61.15	61.23	unclear (1)	81.4		
television (14)	34.11	third (2)	30.18	33.6	110.22	162.13	162.19	under (7)	16.23		
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		thought (4)	67.14		Trade (1)	98.4					

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41:12 85:8 110:20	41:25 42:8 75:11				
135:14 144:16	91 1 105:6 145:11				
weaknesses (1)	145:19				
Week (1)	wrong (2)	66:22			
weeks (1)	140:5				
Welcome (1)	wrote (4)	23:24			
Welfare (1)	56:18 59:20 107:17				
West (1) 65:12	year (17) 17:8	51:1			

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A. WILLIAM ROBERTS, JR. & ASSOCIATES (800) 743-DEPO

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NO. 5513 P. 4/7

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF SOUTH CAROLINA
CHARLESTON DIVISION

SUZANNE Q. LITTLE, individually and as
Personal Representative of the Estate of
SAMUEL MARTIN LITTLE, Deceased,

Plaintiff,

Civil Action No. 2:98-1879-23
Honorable P. Michael Duffy

BROWN & WILLIAMSON TOBACCO
CORPORATION individually and as
successor by merger to THE AMERICAN
TOBACCO COMPANY and
R.J. REYNOLDS TOBACCO COMPANY,

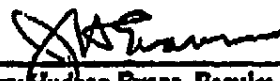
Defendants.

NOTICE OF DEPOSITION DICES TECUM

PLEASE TAKE NOTICE that beginning on March 24, 2000, commencing at 9:00 a.m., counsel for Plaintiff will take the deposition of Lacy K. Ford, Ph.D. ("Deponent") upon oral examination, pursuant to the Federal Rules of Civil Procedure, before an officer authorized by law to take depositions, at the offices of Jones, Day, Reavis & Pogue, 3500 Suntrust Plaza, 303 Peachtree Street, Atlanta, GA 30308. Said deposition is to be taken for discovery purposes, for use as evidence at trial, or both. The oral examination will continue until testimony is completed.

Deponent is requested to have with him at the time and place specified above any and all documents noted on the attached Schedule "A."

Mt. Pleasant, South Carolina
March 14, 2000


Jerry Hudson Evans, Esquire
(Federal Identification No. 7149)
Ness, Motley, Loadholt, Richardson & Poole
P. O. Box 1792
Mt. Pleasant, SC 29465
(843) 216-9000
Attorneys for Plaintiff



52119 9353

SCHEDULE "A"

1. A list of all documents, journals, articles, studies, reports and other such materials used, relied on or referenced by you in the formulation of each of your opinions contained in your expert disclosure or report and in the formation of the testimony and opinions you expect to offer in this case. For each document, journal, article, study, report or other such material referenced above which is not publicly available, a copy of each.

2. Documents which counsel provided the Deponent that pertain to the subject matter of the Deponent's expected testimony.

3. Documents which the Deponent has specifically reviewed in preparation for his testimony in this case which relate to his testimony in this case.

4. Documents prepared by the Deponent in connection with his or her testimony in this case.

5. Medical/scientific articles the Deponent presently anticipates specifically referring to during his direct testimony.

6. All correspondence between defense counsel and Deponent, including billing records in connection with this case.

7. List of Deponent's prior testimony in smoking and health litigation.

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF SOUTH CAROLINA
CHARLESTON DIVISION

SUZANNE Q. LITTLE, individually
and as Personal Representative of the
Estate of SAMUEL MARTIN LITTLE,
deceased,

Plaintiff,

v.

BROWN & WILLIAMSON TOBACCO
CORPORATION, individually and
its successor by merger to THE
AMERICAN TOBACCO COMPANY
and R. J. REYNOLDS TOBACCO
COMPANY,

Defendants.

CIVIL ACTION NO. 2:98-1879-23

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and exact copy of the foregoing *Notice of Deposition Dates Taken* has been served upon the following via facsimile and by United States mail this 14th day of March, 2000:

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*Attorneys for Brown & Williamson Tobacco Corporation
as successor by merger to The American Tobacco Company
and Brown & Williamson Tobacco Corporation*


Carolyn A. Ruiz

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in

produced by ERTC

LITTLE DEPOSITION LIST

	Ddate	Title
1	00/00/1804	Book - King James I: 'A Counterblaste To Tobacco (Excerpt)'
2	00/00/1899	Song - 'Tobacco' With Corresponding Source Material
3	00/00/1788	Book - 'Essays, Literary, Moral & Philosophical'; Rush, B.
4	00/00/1806	Book - 'Observations Upon The Influence Of The Habitual Use Of Tobacco On Health Morals And Property'; Rush, B.
5	00/00/1838	Book - 'An Essay On The Influence Of Tobacco Upon Life And Health'; Mussey, R.D.
6	00/00/1840	Book - 'Tobacco: It's History, Nature, And Effects On The Body And Mind'; Shew, J.
7	08/19/1845	Letter - From John Quincy Adams To Rev. Cox
8	00/00/1851	Book - 'Diary Of The Rev. Solomon Spittle'; Sargent, L.M.
9	00/00/1851	Book - 'The Beauties And Deformities Of Tobacco-Using Or Its Ludicrous And Its Solemn Realities'; Coles, L.B.
10	00/00/1852	Book - 'Thoughts And Stories On Tobacco For American Lads, Or Uncle Toby's Anti-Tobacco Advice To His Nephew Billy Bruce'; Trask, Rev. George
11	00/00/1861	Book - 'Tobacco, The Bane Of The Times'; Hewes, Rev. J.
12	05/00/1862	Report - 'Annual Report Of The American Anti-Tobacco Society'; Trask, G.
13	11/00/1862	Article - 'Reasons Why We Publish The Anti-Tobacco Journal'; Anti-Tobacco Journal
14	00/00/1868	Book - 'The Use Of Tobacco And The Evils, Physical, Mental, Moral, And Social, Resulting Therefrom'; Griscom, J.
15	00/00/1870	Book - 'The Use Of Tobacco vs. Purity, Chastity, And Sound Health'; Cowan, J.
16	04/00/1879	Article - 'Boston Law Against Smoking'; Good Health
17	01/00/1880	Article - 'Tobacco A Cause Of Cancer'; Good Health
18	01/00/1880	Article - 'Slavery To Tobacco'; Good Health
19	03/25/1880	Article - 'Reformation By System'; New York Times
20	04/08/1882	Article - 'Astounding Effects Of Tobacco'; New York Times
21	07/24/1882	Article - 'The Poison In Tobacco Smoke'; New York Times
22	08/18/1882	Book - 'The Physical Effects Of Alcohol And Tobacco'; Kellogg, J.H.
23	10/28/1882	Article - 'Progress Of The Hubbardian Reform'; New York Times
24	00/00/1883	Book - 'Anti-Tobacco' By Livermore, A.A. With 'A Lecture On Tobacco' By Carpenter, Rev. R.L. And 'On The Use Of Tobacco' By Witter, G.F.
25	04/01/1885	Cartoon - 'Statue Of Liberty'; Puck Magazine
26	00/00/1886	Book - 'The Tobacco Problem'; Lander, M.
27	02/08/1886	Article - 'The Coffin Nails Of Our Youth'; Evening Capital Newspaper; Annapolis, Maryland
28	08/10/1887	Article - 'Cigarettes Killed Him'; New York Times
29	09/03/1888	Article - 'Smoking And Throat Diseases'; New York Times
30	00/00/1889	Book - 'The Tobacco Slave And How To Be Liberated From Its Fetters'; Greene, C.A.
31	01/11/1891	Article - 'A Victim Of The Cigarette'; New York Times
32	00/00/1892	Book - 'Tobacco: Its Use And Abuse'; Wight, Rev. J.B.
33	09/25/1892	Article - 'Notes About Cigarettes'; New York Times
34	12/03/1893	Article - 'Schoolboys Sign Pledges'; New York Times
35	12/08/1894	Article - 'No Cigarettes For Boys'; New York Times
36	02/09/1895	Law - 'North Dakota, Chapter 32'
37	04/04/1896	Law - 'Iowa, Chapter 98'
38	02/11/1897	Law - 'Tennessee, Chapter 30'
39	00/00/1899	Law - 'Florida, Chapter 4732 (No. 71)'
40	00/00/1900	Advertisement - 'Sure Cure For The Tobacco Habit'; Sears, Roebuck And Co. Consumers Guide
41	11/19/1900	Law - Austin v. Tennessee; 179 U.S. 343 (1900)
42	03/08/1901	Law - 'Oklahoma, Chapter 13, Art. 4'
43	08/00/1901	Article - 'Cigarette Suloids'; Good Health



LITTLE DEPOSITION LIST

	Date	Title
44	07/12/1901	Article - 'Anti-Cigarette League', New York Times
45	02/00/1902	Article - 'How To Teach The Truth About Tobacco'; Good Health
46	11/00/1902	Article - 'The Tobacco Habit'; Good Health
47	11/07/1904	Article - 'Schoolgirl Smokers Warned: Many Addicted To The Cigarette Habit In Washington, Penn'; New York Times
48	02/28/1905	Law - 'Indiana, Chapter 52'
49	04/04/1905	Law - 'Nebraska, Chapter 198'
50	04/13/1905	Law - 'Wisconsin, Chapter 82'
51	10/08/1906	Article - 'Cost Of The Tobacco Habit'; New York Times
52	11/26/1906	Article - 'Again The Cigarette'; New York Times
53	03/09/1907	Law - 'South Dakota, Chapter 65'
54	05/08/1907	Law - 'Arkansas, Act 280'
55	06/03/1907	Law - 'Illinois, p. 265'
56	09/12/1907	Article - 'Miss Gaston Begins Anti-Cigarette War'; New York Times
57	04/00/1908	Article - 'A Stirring Appeal,' By Dr. Dent Atkinson, Edited By Lucy Page Gaston; The Boy Magazine; Vol. VII, No. 4'
58	04/00/1908	Article - 'National Anti-Cigarette'; The Boy Magazine; Vol. VII, No. 4'
59	07/19/1908	Article - 'Poison In Tobacco Smoke'; New York Times
60	03/02/1909	Law - 'Kansas, Chapter 267'
61	03/22/1909	Law - 'Washington, Chapter 249'
62	04/14/1909	Law - 'Minnesota, Chapter 194'
63	08/08/1909	Article - 'The War On The Cigarette: 5,500,000,000 Cigarettes A Year Is The Problem States Are Now Fighting'; New York Times
64	08/14/1909	Article - 'Prohibition Of Cigarettes'; New York Times
65	02/27/1910	Article - 'Bad Results Of Habit Shown In Records By Prof. McKeever'; New York Times
66	02/27/1910	Article - 'Testing The Boy Who Smokes Cigarettes'; New York Times
67	08/10/1910	Article - 'Form Non-Smokers League'; New York Times
68	07/20/1910	Article - 'Making War On Cigarettes'; New York Times
69	09/17/1910	Article - 'The Cigarette And Its Users'; Harper's Weekly
70	11/10/1911	Article - 'The Non-Smokers League'; New York Times
71	09/05/1912	Article - 'The Narcotic Weed'; New York Times
72	01/04/1913	Article - 'The Truth About Tobacco'; Harper's Weekly
73	05/00/1913	Article - 'What Can We Do About Cancer?'; Ladies Home Journal
74	07/00/1913	Article - 'The Early History Of Tobacco'; Quarterly Review
75	00/00/1914	Book - 'The Case Against The Little White Slave'; Volumes I, II, III, And IV; Ford, Henry
76	01/22/1914	Article - 'Smokers Paleles Painted In Court'; New York Times
77	03/14/1914	Article - 'Cures Women Of Smoking'; New York Times
78	05/14/1914	Article - 'Tobacco A Poison'; New York Times
79	05/28/1914	Article - 'Smoking On Public Buses'; New York Times
80	11/00/1914	Article - 'What's The Matter With My Pulse?'; Ladies Home Journal
81	00/00/1915	Book - 'Tobacco' (Excerpt); Fink, Bruce
82	01/00/1916	Article - 'The Little White Slave'; Good Housekeeping
83	01/00/1916	Article - 'Why The Athlete Does Not Smoke,' by J.H. Kellogg; Good Health
84	05/00/1916	Article - 'Deadly Effects Of Tobacco On Plants And Animals'; Good Health
85	05/00/1916	Article - 'Diseases Caused By Tobacco'; Good Health
86	05/00/1916	Article - 'Eminent Authorities Who Condemn Tobacco'; Good Health
87	05/00/1916	Article - 'Men Who Do Not Smoke'; Good Health
88	05/00/1916	Article - 'Muldoon Opposes Smoking'; Good Health
89	05/00/1916	Article - 'The Crave For Tobacco Is As With All Other Dope Habits, An Artificial One'; Good Health

LITTLE DEPOSITION LIST

	Ddate	Title
90	05/00/1918	Article - 'The Effect Of Tobacco Upon Athletes'; Good Health
91	05/00/1918	Article - 'Tobacco Poisons'; Good Health
92	05/00/1918	Article - 'Young America On Trial'; Good Health
93	05/00/1918	Article - 'The Cigarette Epidemic'; Good Health
94	07/00/1918	Article - 'Robert Louis Stevenson's Last Message'; Good Health
95	08/00/1919	Article - 'Turning Over A New Leaf'; Good Health
96	06/28/1919	Article - 'Women War-Workers Fight For Privileges, Including Smoking'; Literary Digest
97	07/00/1919	Article - 'Shall Tobacco Follow Alcohol?'; Good Health
98	07/00/1919	Article - 'The Committee Of Fifty To Study The Tobacco Problem'; Good Health
99	09/00/1919	Article - 'Tobacco And Lung Tuberculosis'; Good Health
100	01/00/1920	Article - 'The Committee Of Fifty'; Good Health
101	01/10/1920	Article - 'Miss Gaston Seeks Presidency On An Anti-Tobacco Platform'; New York Times
102	02/06/1920	Article - 'See Nation Menaced By Smoking Women'; New York Times
103	05/00/1920	Article - 'Surgeon General Cummings Denounces Smoking'; Good Health
104	07/00/1920	Article - 'International Anti-Tobacco Congress'; Good Health
105	07/00/1920	Article - 'The Tobaccoists Are Getting Worried'; Good Health
106	00/00/1921	Colorado School Textbook - How To Live; Fisher and Fisk
107	03/02/1921	Law - 'Idaho, Chapter 185'
108	03/08/1921	Law - 'Utah, Chapter 145'
109	00/00/1922	Book - 'Tobaccoism'; Kellogg, J.H. (Revised Edition)
110	02/00/1922	Article - 'The Cigarette Club'; Good Health
111	06/00/1922	Article - 'Women Cigarette Fiends'; Ladies Home Journal
112	00/00/1923	Book - 'Tobacco And Mental Efficiency'; O'Shea, M.V.
113	09/02/1923	Article - 'War Is Declared On Demon Tobacco'; New York Times
114	12/00/1923	Article - 'Tobacco Addicts'; Good Health
115	00/00/1924	Book - 'Tobacco: A Three-Fold Study'; Fisher, Irving
116	11/00/1924	Article - 'Does Tobacco Injure The Human Body?'; Reader's Digest
117	03/00/1925	Article - '83,000,000,000 Fags Smoked In United States In 1923'; Good Health
118	12/20/1925	Article - '450 Parents Oppose Smoking By Girls'; New York Times
119	04/00/1926	Article - 'Why Should Smoking Be Prohibited To Girls And Permitted To Young Men'; Good Health
120	07/00/1926	Article - 'Smokers Fail In College Work'; Good Health
121	09/00/1926	Article - 'Graveyard Smoking'; Good Health
122	05/00/1926	Article - 'The Heartless Joke In The Cigaret Ad'; Good Health
123	07/00/1926	Article - 'A Leading String To Dope Habits'; Good Health
124	08/10/1926	Govt. Pub. - Extension Of Food And Drug Act To Tobacco And Tobacco Products, Seventy-First Congress, First Session; Congressional Records
125	08/00/1926	Article - 'Smokes For Women: A Review Of The Evidence Against Them'; Good Housekeeping
126	06/00/1930	Article - 'The Smoker's Heart'; J. H. Kellogg
127	09/24/1933	Article - 'Women And Smoking'; New York Times
128	02/24/1934	Article - 'Tobacco: Research Clarifies Man's Craving For Nicotine'; Newsweek
129	02/00/1935	Article - 'On Giving Up Smoking'; Reader's Digest
130	09/00/1935	Article - 'How Cigaret Smoking Harms Boys'; Good Health
131	02/00/1936	Article - 'Men's Favorite Poisons'; Health Magazine
132	08/00/1936	West Virginia School Curriculum Guide - 'A Guide For Teachers Concerning Alcoholic Drinks And Narcotics'
133	12/21/1936	Article - 'Indian Tobacco v. Tobacco'; Time
134	00/00/1937	Book - 'Tobaccoism'; Kellogg, J.H.

LITTLE DEPOSITION LIST

Date	Title
135 00/00/1938	Video - 'Healthy, Wealthy And Dumb'
136 03/04/1938	Article - 'Tobacco Smoking And Longevity'; Pearl, R.; Science
137 07/00/1938	Article - 'Have A Cigarette'; Consumers Union
138 08/00/1938	Article - 'So You're Going To Stop Smoking?'; Reader's Digest
139 08/00/1938	Article - 'The Best Way To Stop Smoking Is To Stop Smoking'; Consumers Union
140 11/00/1938	Article - 'Cigarette Holders Put To The Test'; Reader's Digest
141 07/00/1940	Article - 'I Quit Smoking Or, Cooper's Last Stand'; Reader's Digest
142 00/00/1941	Video - Movie Clip: 'Strawberry Blonde'
143 12/00/1941	Article - 'Nicotine Knockout, Or The Slow Count'; Reader's Digest
144 12/08/1941	Article - 'Nicotine Addict'; Time
145 00/00/1942	Video - Movie Clip: 'Saboteur'
146 02/00/1943	Article - 'The Use Of Tobacco A Real Addiction'; Good Health
147 00/00/1944	Video - Movie Clip: 'Thirty Seconds Over Tokyo'; MGM/UA
148 02/00/1944	Article - 'Tobacco May Cause Buerger's Disease'; Good Health
149 08/00/1944	Article - 'Are You A Man Or A Smokestack'; Reader's Digest
150 00/00/1947	Video - Song, Lyrics And Music: 'Smoke, Smoke, Smoke That Cigarette'; Tex Williams And Merle Travis
151 12/00/1947	Article - 'My Escape From Tobacco'; Hygeia - The Health Magazine
152 05/03/1948	Article - 'Jam Session: Do You Approve Of Your Date's Smoking Or Drinking?'; Senior Scholastic
153 10/31/1948	Article - 'Tests Of Results Of Smoking Pushed'; New York Times
154 02/27/1949	Article - 'Cigarettes Linked To Cancer In Lungs'; New York Times
155 03/07/1949	Article - 'Medicine: Continuing Fight'; Time
156 10/24/1949	Advertisement - 'Snake Bulk Laxative'; Cleveland Plain Dealer
157 10/24/1949	Article - 'Cigarettes Are Cited In Lung Cancer Study'; New York Times
158 11/00/1949	Poll/Survey - Gallup: Cigarettes
159 12/17/1949	Article - '44 Per Cent Of U.S. Adults Smoke Cigarettes, Averaging 17 A Day, Survey Indicates'; Public Opinion News Service; Gallup
160 00/00/1950	Book - 'What About Smoking?'; Hearn, C. Aubrey
161 00/00/1950	Video - Song, Lyrics And Music: 'With Men Who Know Tobacco Best'; Charles Hayes And Louis Busch
162 01/00/1950	Article - 'How Harmful Are Cigarettes?'; Reader's Digest
163 01/00/1950	Article - 'How To Keep From Dying Sooner Than You Have To'; Better Homes & Gardens
164 02/03/1950	Article - 'Smoking Mice Live Normal Span'; U.S. News & World Report
165 04/00/1950	Article - 'Are You A Man Or A Smokestack? (Reprint)'; Reader's Digest
166 04/00/1950	Article - 'How Harmful Are Cigarettes'; Reader's Digest
167 04/00/1950	Article - 'I Quit Smoking Or Cooper's Last Stand (Reprint)'; Reader's Digest
168 04/08/1950	Article - 'Can We Check The Rising Toll Of Lung Cancer?'; Saturday Evening Post
169 04/27/1950	Advertisement - 'Helene Rubenstein'; Washington Post
170 05/27/1950	Article - 'Smoking Found Tied To Cancer Of Lungs, 94.1% Of Males Studied Used Cigarettes'; New York Times
171 08/12/1950	Article - 'Smoker's Lungs'; Newsweek
172 07/18/1950	Article - 'Cigarettes Linked To Cancer Of Lung'; New York Times
173 00/00/1951	Book - 'Historia De Las Indias'; Fray Bartolome De Las Casas
174 00/00/1951	Video - Walt Disney Cartoon With Goofy Entitled 'No Smoking'
175 03/05/1951	Article - 'Life Without Nicotine'; Newsweek
176 10/28/1951	Article - 'Cancer Researchers Will Survey Smokers'; New York Times
177 11/23/1951	Advertisement - 'Goofy No Smoking Poster'; Walt Disney
178 06/16/1952	Article - 'The Doctor Says'; Baptist Junior Union Quarterly

LITTLE DEPOSITION LIST

Date	Title
179 09/15/1952	Article - 'How To Stop Smoking'; Time
180 11/02/1952	Article - 'Cigarettes And Cancer'; Newsweek
181 12/00/1952	Article - 'Cancer By The Carton'; Reader's Digest
182 12/12/1952	Article - 'British Study Ties Cancer To Tobacco'; New York Times
183 12/22/1952	Article - 'Smoking And Cancer'; Time
184 00/00/1953	Video - Movie Clip: 'From Here To Eternity'
185 03/29/1953	Article - 'Clean In Body'; Baptist Junior Union Quarterly
186 04/00/1953	Article - 'You Should Know All This About Cancer'; Ladies Home Journal
187 04/06/1953	Article - 'Smoking And Cancer'; Time
188 04/30/1953	Article - 'Cancer Aide Testifies'; New York Times
189 05/29/1953	Article - 'Does Smoking Cause Cancer?'; U.S. News & World Report
190 06/03/1953	Article - 'Health Chief Asks Lung Cancer Study'; New York Times
191 10/16/1953	Article - 'Effect Of Smoking In Cancer Obscure'; New York Times
192 11/09/1953	Article - 'Modern Living: Cigarette Hangover'; Time
193 11/16/1953	Article - 'The Warning Shadow'; Newsweek
194 11/21/1953	Article - 'What Has Hit Tobacco Stocks'; Business Week
195 11/30/1953	Article - 'Beyond Any Doubt'; Time
196 12/00/1953	Article - 'Can The Poisons In Cigarettes Be Avoided?'; Reader's Digest
197 12/00/1953	Article - 'The Uproar In Cigarettes'; Fortune
198 12/09/1953	Article - 'Lung Cancer Rise Is Laid To Smoking'; New York Times
199 12/21/1953	Article - 'Cubans Or Coffin Nails?'; Life
200 12/21/1953	Article - 'Smoke Gets In The News'; Life
201 00/00/1954	Book - 'Smoking and Cancer: A Doctor's Report'; Ochsner, A.
202 00/00/1954	Video - Filmstrip: 'Tobacco And The Human Body'; Encyclopedia Britannica
203 01/00/1954	Poll/Survey - Gallup Poll: Health
204 01/00/1954	Poll/Survey - Gallup Poll: Political Quiz
205 01/04/1954	Article - 'A Frank Statement To Cigarette Smokers'; New York Times
206 01/13/1954	Article - 'Interview Of The Week: Fact Smoker'; Senior Scholastic
207 02/03/1954	Article - 'Smoke, Cancer Linked'; New York Times
208 02/08/1954	Advertisement - 'Dayton's'; Minneapolis Tribune
209 02/18/1954	Article - 'Cigarette Factor In Cancer Is Cited'; New York Times
210 02/26/1954	Article - 'Interview With Dr. E. Cuyler Hammond: Is There Proof That Smoking Causes Cancer?'; U.S. News & World Report
211 03/00/1954	Poll/Survey - Gallup: Cancer
212 03/15/1954	Article - 'Cigarettes Tied To Cancer Again'; New York Times
213 03/18/1954	Article - 'Smoking Link Seen By Cancer Society'; New York Times
214 04/00/1954	Article - 'How To Stop Smoking'; Reader's Digest
215 04/00/1954	Article - 'To Smoke Or Not To Smoke...'; Cosmopolitan
216 06/00/1954	Poll/Survey - Gallup Poll: Health Information
217 06/00/1954	Poll/Survey - Gallup Poll: Cigarette Smoking
218 06/18/1954	Article - 'Neutral On Smoking'; New York Times
219 06/22/1954	Article - 'Cigarettes Found To Raise Death Rate In Men 60 To 70'; New York Times
220 06/23/1954	Cartoon - 'The Good Old Days'; Toledo Blade
221 06/25/1954	Article - 'Tobacco Tied To Rising Death Toll In British Doctors' Lung Cancer'; New York Times
222 06/26/1954	Article - 'Cigarettes Get It Again'; Business Week
223 06/27/1954	Article - 'Cigarette-Cancer Question Is Left Open In Report'; New York Times
224 06/28/1954	Article - 'Smoker's Hypothesis?'; Newsweek
225 07/00/1954	Article - 'The Facts Behind The Cigarette Controversy'; Reader's Digest

LITTLE DEPOSITION LIST

Odate	Title
226 07/02/1954	Article - 'Interview With Dr. E. Cuyler Hammond: Does Smoking Shorten Life?'; U.S. News & World Report
227 07/05/1954	Article - 'Smoking And Cancer (contd.)'; Time
228 07/05/1954	Article - 'The Week's Topic A: How Do I Swear Off?'; Life
229 08/22/1954	Article - 'What About Smoking'; Baptist Young People's Union Quarterly
230 10/12/1954	Article - 'Smoking Assailed By A Cancer Group'; New York Times
231 11/00/1954	Article - 'How I Stopped Smoking'; Reader's Digest
232 11/00/1954	Poll/Survey - Gallup Poll: Biblical Quiz
233 12/18/1954	Article - 'All About Smoking And How To Stop It'; Saturday Evening Post
234 12/27/1954	Article - 'Cancer & Horror'; Time
235 04/17/1955	Article - 'Nicotine Doubled As Cancer Factor'; New York Times
236 05/31/1955	Transcripts - CBS News: 'See It Now,' Part I (5/31/55) and Part II (6/7/55)
237 05/31/1955	Video - CBS Television Program: 'See It Now Part I 5/31/55 and Part II 6/7/55'; E.R. Murrow
238 06/01/1955	Article - TV: Cigarettes And Cancer; New York Times
239 06/03/1955	Article - 'Cancer Of The Lungs Called Epidemic'; New York Times
240 06/07/1955	Article - '2 New Reports Tie Cancer To Smoking'; New York Times
241 06/13/1955	Article - 'Cancer - Latest Report'; Newsweek
242 06/17/1955	Article - 'Latest On Smoking And Cancer'; U.S. News & World Report
243 08/11/1955	Article - 'Mayo Men Sees Fallacy In Smoking - Cancer Link'; New York Times
244 00/00/1956	Article - 'The Impact Of Health News On Attitudes And Behavior'; Journalism Quarterly
245 01/00/1956	Article - 'Lung Cancer And Smoking: What We Really Know'; Atlantic Monthly
246 02/25/1956	Article - 'Cancer Is Linked Anew To Smoking'; New York Times
247 02/27/1956	Article - 'Cigarettes Tied To Cancer Again'; New York Times
248 06/17/1956	Article - 'Cigarettes Cited In Cancer Study'; New York Times
249 07/00/1956	Article - 'Why An Airline Pilot Quit Smoking'; Reader's Digest
250 11/26/1956	Article - 'Cigarettes Held A Health Hazard'; New York Times
251 12/00/1956	Article - 'Lung Cancer And Smoking'; Ladies Home Journal
252 12/14/1956	Article - 'What Young People Think - Teen Smokers Feel 'Adult' And Don't Worry About Cancer'; Tampa Tribune
253 00/00/1957	Video - Movie Clip: 'Heaven Knows Mr. Allison'
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255 03/23/1957	Article - 'Text Of Scientists' Report On Relationship Of Smoking To Cancer And Other Diseases'; New York Times
256 04/00/1957	Article - 'Denicotinized Cigarettes - How Good Are They?'; Good Housekeeping
257 04/01/1957	Article - 'The Smoking Issue'; Newsweek
258 04/22/1957	Article - 'A Clue In The Studies Of Smoking Dangers'; Life
259 06/00/1957	Poll/Survey - Gallup Poll: Cigarette Smoking and Cancer
260 06/05/1957	Article - 'Cigarette Smoking Linked To Cancer In High Degree'; New York Times
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262 06/14/1957	Article - 'Smoking And How Long You Live'; U.S. News & World Report
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264 06/17/1957	Article - 'Special Medicine Report, The Doctors Talk, The Heart, Nutrition, Smoking, Ethics'; Newsweek
265 07/00/1957	Article - 'The Facts Behind Filter-Tip Cigarettes'; Reader's Digest
266 07/13/1957	Article - 'U.S. Links Cancer With Cigarettes'; New York Times
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269 07/22/1957	Article - 'Cigarette Controversy Smokes Up Here And Abroad'; Newsweek
270 07/22/1957	Article - 'Smoking & Cancer (contd.)'; Time
271 07/22/1957	Article - 'The Gallup Poll: Cigarettes Linked To Cancer? Public Now Thinks So'; Philadelphia Evening Bulletin
272 07/23/1957	Govt. Pub. - Excerpts From Congressional Hearing Transcripts Subcommittee Of The Committee On Government Operations, 85th Congress
273 07/24/1957	Article - 'Tar In Cigarettes Lung Cancer Clue'; New York Times
274 07/24/1957	Article - 'Tells Change In Tobacco At 800 Degrees'; Chicago Tribune
275 07/26/1957	Article - 'Interview With Dr. John R. Heller: The Truth About Smoking And Cancer'; U.S. News & World Report
276 07/26/1957	Article - 'What Britons Are Told About Lung Cancer And Tobacco'; U.S. News & World Report
277 07/31/1957	Video - President Eisenhower News Conference
278 08/00/1957	Article - 'Wanted--And Available--Filter- Tips That Really Filter'; Reader's Digest
279 00/00/1958	Video - Movie Clip: 'Damn Yankees'
280 01/00/1958	Article - 'Nicotine - The Smoker's Enigma'; Reader's Digest
281 01/00/1958	Article - 'Research Indicates Mother's Smoking Can Harm An Unborn Baby'; Better Homes & Gardens
282 05/00/1958	Poll/Survey - Gallup Poll: General Knowledge
283 07/00/1958	Article - 'The Cigarette Industry Changes Its Mind'; Reader's Digest
284 07/07/1958	Article - 'US Weighs Warning To Smokers'; NY World Telegram
285 07/13/1958	Article - 'Science In Review: Reports Of Progress In Fight On Cancer Hold Out Hope Of Cutting Death Toll'; New York Times
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287 11/17/1958	Article - 'Doomed To A Smokeless Agony: British Addicts Gasp Nobly Through Antibacco Experiment'; Life
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289 04/18/1959	Advertisement - 'Texas Yellow Pine'; Dallas Morning News
290 04/27/1959	Article - 'Smoking & Cancer (contd.)'; Time
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294 07/00/1959	Poll/Survey - Gallup Poll: Fidel Castro
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296 11/00/1959	Article - 'The Search For Safer Cigarettes'; Reader's Digest
297 11/00/1959	Poll/Survey - Gallup Poll: Television Commercials
298 12/07/1959	Article - 'Smoking: Dr. Burney's Alarm'; Newsweek
299 12/11/1959	Article - 'Burney Disputed On Cancer Study'; New York Times
300 12/12/1959	Article - 'Smoking and Lung Cancer'; JAMA Editorial
301 12/21/1959	Article - 'Medicine: Cigarettes: Do They - Or Don't They?'; Newsweek
302 00/00/1960	Book - 'Cigarettes And Health'; Pat McGrady, American Cancer Society
303 00/00/1960	Video - 'Anti-Smoking Television Public Service Announcements (American Cancer Society; 1960s-1980s)'
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307 01/24/1960	Article - 'What Does The Doctor Say'; Baptist Junior Union Quarterly
308 02/17/1960	Poll/Survey - Senior Scholastic Poll: Students See Link Between Smoking And Cancer
309 04/00/1960	Article - 'The Better Way: Stop Smoking Drugs: Do They Do The Job?'; Good Housekeeping
310 04/11/1960	Article - 'Tobacco, The Controversial Princess'; Time
311 04/13/1960	Article - 'Smoking And Cancer...Quest For A Missing Link'; Senior Scholastic
312 04/27/1960	Article - 'Cancer Facts Cut Teen-Age Smoking'; Scholastic Teacher
313 05/10/1960	Article - 'Flemming Vetoed A Cigarette Ban'; New York Times
314 07/08/1960	Article - Dear Abby: 'Human Chimney Must Want Damper Himself'; Jacksonville Journal
315 09/30/1960	Article - 'Premier Tonight - Flintstones'; New York Times
316 10/01/1960	Advertisement - 'The Flintstones'; TV Guide
317 10/08/1960	Advertisement - 'The Flintstones'; TV Guide
318 10/16/1960	Article - 'The Flintstones - Cartoon For Grown-Ups'; TV Guide
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320 11/21/1960	Article - 'Stone Age Hero's Smash Hit: TV's First Cartoon Stars The Suburban Flintstones'; Life
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322 00/00/1961	Article - 'The Public Image Of Cancer Etiology'; Public Opinion Quarterly
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330 00/00/1962	Video - 'Is Smoking Worth It?'; American Cancer Society
331 00/00/1962	Video- Movie Clip: 'Sweet Bird Of Youth'
332 01/10/1962	Article - 'Jam Session: Do You Think Teen-Agers Should Smoke? Drink?'; Senior Scholastic
333 02/00/1962	Article - 'Medical Practice And Lung Cancer'; Robins, L.; Minnesota Medicine
334 02/27/1962	Article - Ann Landers: 'Non-Smoker Is Better Off Without The Weeds'; Lafayette Daily Advertiser
335 03/19/1962	Article - 'On The Line Again'; Newsweek
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338 07/26/1962	Article - Ann Landers: 'Gritted Teeth And Courage Tear Away Nicotine Hook'; Memphis Commercial Appeal
339 08/00/1962	Article - 'Where Do We Stand On Medicine's Big Three?: Cancer, Heart Disease, Stroke'; Better Homes & Gardens
340 08/12/1962	Article - 'Habits That Build'; Baptist Junior Union Quarterly
341 09/00/1962	Article - 'How To Stop Smoking (Reprint)'; Reader's Digest
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345	11/19/1962	Article - 'Medicine: Smoking And Health'; Newsweek
346	11/26/1962	Article - 'Divorcing Lady Nicotine'; Newsweek
347	01/09/1963	Article - 'Where There's Smoke...The Burning Issue Of Cigarettes And Health'; Senior Scholastic
348	02/23/1963	Article - 'Smoking's Link To Cancer Called 'Only An Inference'; New York Times
349	03/15/1963	Article - 'Habits: One Way To Stop Smoking'; Time
350	04/18/1963	Article - '5-Day Plan Helps Smokers To Quit'; New York Times
351	05/00/1963	Article - 'How I Stopped Smoking'; Home Life
352	06/24/1963	Article - 'Smoke And Fire'; Newsweek
353	07/21/1963	Article - 'Straight Talk About Smoking'; Baptist Junior Union Quarterly
354	08/00/1963	Article - 'The Cigarette Controversy: A Storm Is Brewing'; Reader's Digest
355	08/00/1963	Reel/Survey - Gallup: Civil Rights March
356	10/00/1963	Article - 'A New Way To Cut Out Smoking'; Reader's Digest
357	11/00/1963	Article - 'Smoking Behavior, Recreational Activities And Attitudes Toward Smoking Among Newton Secondary Children'; Pediatrics
358	11/18/1963	Article - 'How To Stop Smoking: 'Guerrilla Gambit' Or Cruise Cure?'; Newsweek
359	11/18/1963	Article - 'Smoking And Health: The US Decision'; Newsweek
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361	12/05/1963	Article - 'Summary Of Cancer Society's Report On Smoking'; New York Times
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366	01/11/1964	Video - CBS News Extra: 'Harry Reasoner On Smoking & Health SG Report (1964)'
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369	01/12/1964	Article - 'Report Not Convincing To A Scientist At Yale'; New York Times
370	01/12/1964	Article - 'Summary And Conclusion Of U.S. Report On Links Between Smoking And Health'; New York Times
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372	01/15/1964	Article - 'King James Started Tobacco Dispute In 1604'; Philadelphia Inquirer
373	01/16/1964	Article - 'Smoking Report Is A Best Seller, Hottest Item Now Going At Government Bookstore'; New York Times
374	01/17/1964	Article - '300 Give Up Habit At Smoking Clinic'; New York Times
375	01/17/1964	Article - 'Smoking: The Government Report'; Time
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377	01/20/1964	Article - 'Here's The Latest On Tobacco And Health'; U.S. News & World Report
378	01/22/1964	Cartoon - 'Federal Trade Commission Plans Strife Ad Rules On Smoking'; Orlando Sentinel
379	01/24/1964	Article - 'Government Report Nails Down Smoking Hazards: Verdict on Cigarettes: Guilty as Charged'; Life
380	01/24/1964	Article - 'Newspapers - Being Nonchalant About Smoking'; Time
381	01/30/1964	Article - 'No Racial Factors Revealed In Report On Smoking And Cancer'; Jet
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384 03/18/1964	Article - 'Medical Men Differ On Cigarette Labeling'; Florida Times Union
385 04/00/1964	Article - 'Cigarettes - Tried And Found Guilty'; Reader's Digest
386 04/00/1964	Article - 'I Quit Smoking Or Cooper's Last Stand (Reprint)'; Reader's Digest
387 04/06/1964	Article - 'Full Text Of AMA Letter Of Testimony To FTC'; JAMA
388 04/16/1964	Video - CBS Reports: 'Cigarettes: A Collision Of Interests'
389 04/17/1964	Article - 'Smoking: It Is Less Hazardous'; Time
390 05/00/1964	Article - 'The Dilemma Of The Problem Smoker'; Reader's Digest
391 08/00/1964	Article - 'A Woman's Reasons'; Home Life
392 00/00/1965	Law - Restatement (Second) Of Torts Section 402A, Comment I
393 00/00/1965	Law - Restatement (Second) Of Torts Section 402A, Comment I
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395 01/00/1965	Article - 'The Year I Won The War Against Cigarettes'; Reader's Digest
396 01/14/1965	Article - 'Nat Cole's Fight For His Life, Crooner Plans Future Though Cancer Tries To Silence Him'; Jet
397 01/25/1965	Article - 'Smoking Habits - What Surgeon General Says'; U.S. News & World Report
398 02/14/1965	Article - 'Cigarette Scare Is Felt, But Smokers Accept Risk'; New Orleans Times-Picayune
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401 07/27/1965	Law - Federal Cigarette Labeling And Advertising Act
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403 09/00/1965	Florida School Curriculum Guide - 'Smoking And Health'; Florida Committee On Smoking And Health, Jacksonville
404 02/26/1966	Article - 'Dear Abby: He's Smoking Hot'; Pacific Stars & Stripes
405 03/00/1966	Article - 'Increasing Dangers From A Little-Known Lung Disease'; Good Housekeeping
406 03/04/1966	Article - 'Research: The Smoking Woman'; Time
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408 04/00/1966	Article - 'The Story Of An Ex-Smoker'; Reader's Digest
409 05/00/1966	Article - 'The Better Way: Is There A Best Way To Stop Smoking?'; Good Housekeeping
410 05/00/1966	Article - 'What Your Family Should Know About Emphysema'; Better Homes & Gardens
411 07/00/1966	Article - 'The Man Who Wrote His Own Obituary'; Reader's Digest
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413 10/31/1966	Article - 'No-Smoking Signs'; Newsweek
414 00/00/1967	Report - 'Progress 1967'; Annual Report Of The American Heart Association
415 00/00/1967	Video - 'Like Father Like Son'; American Heart Association Public Service Announcement
416 00/00/1967	Video - Movie Clip: 'You Only Live Twice'
417 01/00/1967	Memo - 'Educational Materials Memo #428' From American Heart Association To All Heart Associations w/attached Don't Smoke Posters
418 03/00/1967	Article - 'Students Express Views On Smoking'; Journal Of School Health
419 03/00/1967	Article - 'You Can Stop Smoking And Stay Thin'; Ladies Home Journal
420 05/00/1967	Article - 'Detection Of Oral Cancer: A Way To Save Lives'; Good Housekeeping
421 11/00/1967	Article - 'Do You Really Want To Stop Smoking?'; Reader's Digest
422 00/00/1968	Video - CBS News Special: National Smoking Test
423 00/00/1968	Video - Film: 'As We See It'
424 03/26/1968	Presentation - 'Current Smoking Among Teenagers'; D. Horn; American Cancer Society
425 05/00/1968	Article - 'Doctor's Dilemma: My Problem And How I Solved It'; Good Housekeeping

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428 11/03/1968	Article - 'Output Falls Off: Is End Near For Smoking'; Syracuse Herald American
429 12/00/1968	Article - 'Coming: Action To Reduce Cigarette Smoking?'; Reader's Digest
430 00/00/1969	Law - Federal Cigarette Labeling And Advertising Act As Amended
431 02/00/1969	Article - 'More Bad News For Smokers'; Reader's Digest
432 02/17/1969	Article - 'Countdown For Cigarettes'; Newsweek
433 02/27/1969	Article - 'Teacher With New Heart Returns To Classroom, Tells Youths Dangers Of Smoking, Other Abuses Of Health'; Jet
434 03/00/1969	Article - 'Are You A Nicotink'; Home Life
435 03/00/1969	Article - 'What's Being Done About The Growing Menace Of Lung Diseases?'; Good Housekeeping
436 04/28/1969	Article - 'Caution: This Hearing Is Hazardous'; Newsweek
437 05/08/1969	Article - 'Public Service: Calling Dr. Killjoy'; Time
438 06/28/1969	Article - 'Needling The Smoker To Kick The Habit'; Business Week
439 07/00/1969	Poll/Survey - U.S. Government Survey: Use Of Tobacco, Practices, Attitudes, Knowledge, And Beliefs United States--Fall 1964 and Spring 1968
440 07/00/1969	Poll/Survey - Gallup Poll: Cigarette Smoking
441 08/20/1969	Article - 'UF Study Shows Smokers Blame Friends, Not Ads'; Florida Times Union
442 12/31/1969	Video - CBS News Report: Obituary Of William Telman
443 02/00/1970	Article - 'How Hypnosis May Help You To Quit Smoking'; Good Housekeeping
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445 03/02/1970	Article - 'Kicking The Habit'; Newsweek
446 10/00/1970	Article - 'Nine Steps To A Longer Life'; Reader's Digest
447 01/25/1971	Article - 'A Ban On Public Smoking'; Newsweek
448 03/00/1971	Article - 'Methods That Have Helped Many People To Stop Smoking'; Good Housekeeping
449 07/00/1971	Article - 'Still Dying For A Smoke?'; Reader's Digest
450 10/00/1971	Article - 'Why Health Hazards Are Rising for Women Smokers'; Good Housekeeping
451 00/00/1972	Poll - Teenage Smoking, National Patterns Of Cigarette Smoking, Ages 12 Through 18, In 1968 And 1970; U.S. Dept. of Health, Education, and Welfare, Public Health Service
452 02/11/1972	Video - Sanford & Son Episode: 'A Matter Of Life And Breath'
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454 08/28/1972	Article - 'The Sol-Weed Doctor'; Newsweek
455 09/00/1972	Article - 'New Findings About Carbon Monoxide'; Good Housekeeping
456 09/00/1972	Poll/Survey - Harris Poll: Watergate
457 01/00/1973	Poll/Survey - Gallup Poll: 'Me'
458 03/00/1973	Article - 'The Calculated Cigarette Risk'; Home Life
459 06/00/1973	Article - 'Better Ways To Stop Smoking'; Reader's Digest
460 09/00/1973	Poll/Survey - Gallup Poll: Metric System
461 10/00/1973	Article - 'How Stop-Smoking Clinics Work'; Good Housekeeping
462 01/10/1974	Article - 'Smokers Are Susceptible To More Heart Attacks'; Jet
463 05/00/1974	Article - 'Ten Common Misconceptions About Cancer'; Better Homes & Gardens
464 07/00/1974	Article - 'The Rise Of Cancer In Black Men'; Ebony
465 11/00/1974	Article - 'Ten Famous Former Cigarette Addicts Tell 'How I Quit Smoking' - And Three Others Confess They Couldn't Make It'; Good Housekeeping
466 00/00/1975	Book - 'Dictionary Of American Slang'; H. Wentworth
467 04/00/1975	Article - 'The Growing Risks That Women Smokers Face'; Good Housekeeping

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469 10/00/1975	Poll/Survey - Gallup Poll: General Knowledge
470 12/08/1975	Article - 'Minnesota: No Smoking'; Newsweek
471 01/12/1976	Article - 'Smoking: Fighting Fire With Ire'; Time
472 05/00/1976	Article - 'Cigarettes And Sudden Death'; Reader's Digest
473 02/00/1977	Article - 'Lifesaving Report: The Deadly New Facts About Women And Smoking'; Good Housekeeping
474 02/21/1977	Article - 'The Chemistry Of Smoking'; Time
475 06/00/1977	Poll/Survey - Gallup Poll: C.P.R. Lifesaving Techniques
476 07/00/1977	Poll/Survey - Gallup Poll: Honesty And Ethical Standards
477 08/00/1977	Poll/Survey - Gallup Poll: Cigarette Smoking
478 11/00/1977	Article - 'A Way To Reduce Your Chances Of Getting Cancer'; Reader's Digest
479 01/00/1978	Article - 'The Ten Worst Things You Can Do To Your Health'; Ebony
480 01/30/1978	Article - 'The Latest War On Smoking'; Newsweek
481 02/00/1978	Article - 'Where We Stand In The Fight Against Cancer'; Good Housekeeping
482 05/00/1978	Article - 'Why Does Mommy Smoke?'; Good Housekeeping
483 08/21/1978	Article - 'The Politics Of Tobacco'; Time
484 11/00/1978	Article - 'Women And Cigarettes: The Deadly New Evidence'; Good Housekeeping
485 01/22/1979	Article - 'More Smoke'; Time
486 04/00/1979	Article - 'Does A No Smoking Sign Really Mean What It Says?'; Good Housekeeping
487 04/00/1979	Article - 'Nonsmokers' Rights: What Are They?'; Good Housekeeping
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489 06/00/1979	Articles - 'Where Do We Stand In The Fight Against Cancer?'; Better Homes & Gardens
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492 01/26/1981	Article - 'Secondhand Smoke And Lung Cancer'; Newsweek
493 01/28/1981	Article - 'Smoke Signals'; Time
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495 02/00/1981	Article - 'Thank You For Not Smoking, The Hundred-Year War Against The Cigarette'; American Heritage
496 05/00/1981	Article - 'Can Your Husband's Cigarette Give You Cancer?'; Good Housekeeping
497 06/00/1981	Poll/Survey - Gallup Poll: Cigarette Smoking
498 07/06/1981	Article - 'Tobacco Wars: Is Passive Smoking Harmful?'; Time
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503 05/10/1982	Govt. Pub. - Excerpts From The Hearing Before The Committee On Commerce, Science, And Transportation, United States Senate, 97th Congress, Second Session On S. 1929
504 06/21/1982	Article - 'Warning Labels On Cigarettes'; U.S. News & World Report
505 06/00/1983	Poll/Survey - ABC News Poll: First President
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507 07/18/1983	Article - 'Puffing Hard Just To Keep Up'; Time
508 07/18/1983	Article - 'Warring Over Warnings'; Time

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510 12 00 1983	Article - 'Policy Over Politics', New York Journal of Medicine
511 03 00 1984	Article - 'How To Be An Ex-Smoker', Reader's Digest
512 06 04 1984	Article - 'New Warnings On Smoking', Newsweek
513 06 04 1984	Article - 'Smoke-Filled Rooms', Time
514 10 00 1984	Article - 'Health Gum For Smokers', Better Homes & Gardens
515 10 12 1984	Law - Federal Cigarette Labeling And Advertising Act As Amended
516 01 00 1985	Poll/Survey - NCHS Survey Health Promotion And Disease Prevention Provisional Data From The National Health Interview Survey, United States, January-June 1985
517 02 00 1985	Article - 'The Magic Words That Helped Me Give Up Smoking', Good Housekeeping
518 05 00 1985	Article - 'Confessions Of An Ex-Smoker', Reader's Digest
519 07 00 1985	Article - 'Scoreboard On Smoking', Good Housekeeping
520 09 16 1985	Article - 'Smoke Signs', Time
521 11 18 1985	Article - 'Tobacco Takes A New Road', Time
522 12 23 1985	Article - 'Rx From AMA Snuff Out Tobacco Ads', U.S. News & World Report
523 12 23 1985	Article - 'Setting Off The Smoke Alarm', Time
524 00 00 1986	Book - 'The Slang and Jargon Of Drugs And Drink', Spears, R.
525 01 06 1986	Article - 'Up In Smoke', Time
526 04 07 1986	Article - 'A Cloudy Forecast For Smokers', Time
527 05 25 1986	Article - 'A Pamphleteer Tackles The Changing Problems Of Society', New York Times
528 07 21 1986	Article - 'Restrict Smoking In Public Places?', U.S. News & World Report
529 12 29 1986	Article - 'Involuntary Risk', Time
530 02 00 1987	Poll/Survey - NORC Poll Government/ Congress
531 02 02 1987	Article - 'Cold Turkey A Ban On Smoking-At Home', Time
532 02 23 1987	Article - 'Tough Times For Tobacco Lobby', U.S. News & World Report
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534 04 00 1987	Article - 'Smoking Under Fire', Good Housekeeping
535 04 27 1987	Article - 'Hands Up And Butts Out!', Time
536 05 18 1987	Article - 'Thou Shalt Not Smoke', Time
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538 09 28 1987	Article - 'Where There's No Smoke...', Time
539 04 18 1988	Article - 'All Fired Up Over Smoking', Time
540 04 18 1988	Article - 'Big Apple Smoke Lift', U.S. News & World Report
541 04 18 1988	Article - 'Confessions Of A Nicotine Freak', Time
542 05 02 1988	Article - 'No Smoking At 20,000 Feet', U.S. News & World Report
543 05 30 1988	Article - 'Getting Hooked On Tobacco', Newsweek
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545 05 30 1988	Article - 'Why It's So Hard To Quit Smoking', Time
546 06 27 1988	Article - 'Tobacco's First Loss', Time
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548 08 29 1988	Article - 'The Kick-The-Habit Business', Newsweek
549 10 00 1988	Article - 'Want To Stop Smoking? Here's How!', Good Housekeeping
550 01 23 1989	Article - 'A Not-So-Happy Anniversary', Time
551 01 23 1989	Article - 'A Stroke Alert Sounds For Smokers', U.S. News & World Report
552 03 00 1989	Article - 'Cigarette Face - Another Reason Not To Smoke', Good Housekeeping
553 04 17 1989	Article - 'Big Tobacco's Toughest Road', U.S. News & World Report
554 07 00 1990	Poll/Survey - Gallup Poll. Cigarette Smoking
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556 12/01/1991	Poll/Survey - 'Mirror Of America Despite Increasing Hostility, One In Four Americans Still Smokes', The Gallup Poll News Service
557 12/11/1991	Advertisement - 'Health Rewards', Journal Of The American Medical Association
558 00/00/1992	Book - 'The Journal Of Christopher Columbus', Jane, C.
559 03/00/1992	Poll/Survey - 'Survey Of The Public's Attitudes Toward Smoking, Conducted For The American Lung Association', Gallup
560 05/00/1993	Poll/Survey - 'Smoking Prevalence, Beliefs, And Activities', The Gallup Organization, Inc
561 00/00/1994	Book - 'The Thesaurus Of Slang', Lewin, E.
562 00/00/1994	Book - 'Random House Historical Dictionary Of American Slang', Vol 1, A-G, Lighter, J
563 10/00/1995	Poll/Survey - Gallup Poll: Honesty And Ethical Standards
564 04/16/1996	Article - Ann Landers 'It Is Never Too Late To Stop Smoking', Cleveland Plain Dealer
565 06/00/1996	Poll/Survey - Gallup Poll: People In The News
566 00/00/1997	Book - 'Random House Historical Dictionary Of American Slang', Vol 2, H-O, Lighter, J.
567 08/01/1997	Article - 'Cigarette Smoking Attitudes And First Use Among Third-through Sixth-Grade Students: The Bogalusa Heart Study', American Journal of Public Health
568 12/08/1997	Poll/Survey - USA Today: Tiger Is A Household Name
569 00/00/1998	Book - 'NTC's Thematic Dictionary Of American Slang', Spears, R
570 07/01/1998	Advertisement - 'Healthy Choice Advertisement From The American Heart Association', Wall Street Journal
571 08/00/1998	Poll/Survey - 'Attitudes And Behavior Related To Smoking Cessation', The Gallup Organization, Inc
572 10/14/1998	Poll/Survey - Gallup Poll: Americans Agree With Philip Morris: Smoking Is Harmful
573 11/18/1998	Poll/Survey - Gallup Poll: Majority Of Smokers Want To Quit, Consider Themselves Addicted
574 12/20/1998	Poll/Survey - Gallup Poll: Long-Term Gallup Poll Trends: A Portrait Of American Public Opinion Through The Century
575 00/00/0000	Various Voluntary Health Organization Materials
576 00/00/0000	Video - Excerpts From Selected Movies
577 00/00/0000	Video - Excerpts Of Selected Educational Films
578 00/00/0000	Various Baptist Materials
579 00/00/0000	Various Alabama, Connecticut, North Carolina, South Carolina Health Education Laws
580 00/00/0000	Various Alabama, Connecticut, North Carolina, South Carolina Laws Relating To Tobacco
581 00/00/0000	Various Alabama, Connecticut, North Carolina, South Carolina School Textbooks
582 00/00/0000	Various Alabama, Connecticut, North Carolina, South Carolina Teachers' & Curricula Guides
583 00/00/0000	Various North Carolina Newspaper Articles Including Asheville Citizen, Charlotte News, Charlotte Observer, Durham Morning Herald, Durham Sun, Fayetteville Observer, Raleigh News And Observer, Shelby Daily Star
584 00/00/0000	Various South Carolina Newspaper Articles Including Charleston Evening Post, Charleston News & Courier, Greenville News, Greenville Piedmont, Spartanburg Herald, Spartanburg Journal
585 00/00/0000	Various Alabama Newspaper Articles Including Birmingham News, Birmingham Post-Herald, Montgomery Advertiser
586 00/00/0000	Article - 'Ciger, Cigarette Or Pipe?', Mather, A.H.
587 00/00/0000	Horse Drawn Cart
588 00/00/0000	Map Of States With Cigarette Prohibition Laws

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LITTLE DEPOSITION LIST

Ddate	Title
589 00/00/0000	Various Articles From The Anti-Tobacco Journal (1859-1872)

3

HUMPHREY

in

produced by RJRT

Vol I
(1999)

Produced by RIKTO

Little

(b. 1945)

Samuel Martin Little

• her wife Suzanne

lives in Mt Pleasant, SC - for 8-9 yrs

married 15 years

own automotive tire distribution business (3 yrs)

filed suit 2-3 yrs after diagnosis

looked at adv w/ lawyer / Cipstone transcripts

lost home to Hugo

finished 12th grade

golf & handyman hobbies

businessman, leader

major success as wife's agent

curious

risk management

negotiate landlord

made efforts to quit as early as 1978 - "not healthy"
"general medical"

newspaper, magazine, TV news

read SF Express & Academic Digest

John Toms & Newswatch

to claim he didn't know it was hard to quit when he
started; tried hypnosis, sed. & given to quit

to use a summer

to spend 20 yrs in chemical industry

BEST IMAGE

PLAINTIFF'S
EXHIBIT

3

1-24-99 AD

52119 9374

were much woodworking

regard of 'revelant'

164
"common knowledge"
among woodworkers

divorced twice

one child by first, 2 by second, 2 by third

has been for weeks

a social drinker

mother, father, & brother smoked
+ L, Linda, smoke

Is chosen to drink coffee

155 heard of 'cotton mouth'

heard it in High School

when heard of cancer there
was fit

known & remember "Smoke, Smoke"

"S" smoke

Not to PSA's

remember "Life & Death"

[current back
age 13 + 8]

attended First Sister Dorely regularly

earlier lived in Spartanburg (include married to Linda).

Sanford, NC (for Charles)

early warning on ~~each~~ pack had no effect

heard of S & Report

Does have told little smoking can kill him; L has used cocaine

2

quit in '55, had smoke Carlton for 15 years
Barclay's for a few months
earlier - Winston's (15 yrs or longer)

started on med - 50's at age 10 or 12
New Year Day 1956 (a house in Connecticut)
became a daily smoker at age 16

never in military

changed to Barclay's for lower tar - nicotine
then went to Carlton's - "lowest" in town
trying to "mean" himself.

when
a health
concern?

sup he consumed more
Barclay's

constant headache kept him out of military in Viet Nam era

vol 2

currently married to Suzanne Queney 1983

from Mass
inter worker for Holmes & Thomas
owns a retail clothing store

first wife was Charlene (Holmes in '63 or '64; met in
high school in Delhi's, SC

HS in Sanford, NC

had a son, Mark

dated 3 months
pregnant at time
of marriage
later adopted maybe a year
in ex-wife's life

52119 9376

married Linda Currie in '61 in Burlington, Vt

met in Charlotte, Vt

may live
in Coker, SC now

lived in Sparta, Vt
a friend died in her 30s of lung cancer in 1970 or so

in mid-70s, M & L switched to Berkeley

~~the~~ divorced in '76-77

had a daughter Catherine

father, C Baldwin Little, lived on Carmel Rd in Charlotte
worked in textile management
Shelburne

grandparents had a farm
in Chester Co.

M & L born in Sparta, Vt

lived around the mill

may have been in Atl for graduated

6, 1944, in Connecticut

lived in Sanford, Vt (Central High)

also went to Oak Ridge Academy

in Vt

attended Zee-Mae in Banner & Co, Vt

attended some history at Appalachian

family moved to Charlotte, 1945-1946-1947

moved to Sparta (Coville Heights)

BEST IMAGE

3

has friends or friends

got CEO?

SMC worked for Campbell Soup

McLessen Chemical

& other chemical companies

to look name

current CPEC

went to work for Cameron & Bartley - deal supplier -

about 3 yrs ago

then started own company - Harpagon Nutrition - age 47

17 managers started

60 or so employees

(Stebel Oil & Tine)

29m gross

120% over

3% margin

Don't immediately when diagnosed with lung cancer

ADD? - age - medicine

a friend who's

17 SMC wondered if that's why

a psychiatrist

he didn't do well in school

[some history of depression -]

held by a doc friend to quit 10 or 12 yrs ago

& down addition

p. 277 - I said it was "common knowledge" so that
some people can quit with history

SMC made list of deacons re making

52119 9378

had pneumonia in 1988

health problems from smoking started SML since 1970s

stopped carefully for safe work

lost drivers license
on route as a
teenager

experience of her - nicotine ratings

DAF Testing

10th III :

James her elementary school teacher smoked

father in Carroll Baldwin Little
mother was Virginia Turner Little

has an older brother
who smoked

once lived in Salem, Ore & worked for Oakland Oil

smoke 10 cigarettes every Sunday on a bed ; smoked to be like
an adult

smoked from 1 to 2 packs
per day

believes her addicted to cigarettes

does not specifically remember the '64 SG Rep
usually read local newspaper
mentions, CO, CNA (Post-Coverer)
Spartanburg Herald

knows who Brown was
TV news

4

school-

Spart - cresson 1+2

Atlanta, CT

Sanford, NC grades 9-10 (See Co, &c

possible anterior exposure?

spoke with
Dadney, Haver

AND w/ desperately
seem a basket as a result
have they were against smoking

late attended Fort Haver in Sport

vol 4

later taking prescription smoking cessation drug

say that never said smoking wasn't harmful
no accurate recollection of Frank statement /
doesn't know anything about a "false controversy"

divorce from Linda became final on May 23, 1999

known Tommy Pierce in Sport.

Jan 1999

SUZANNE L. Hte (unfo)

Suzij

born in 1957 in Boston

married July 16, 1983

her friend

SL grew up Catholic

ML came spread to lymph node

→ had pneumonia in 1988

→ didn't smoke during

attended Boston College

retail clothing

her parents were teachers

never smoked

ML asked

Sadov, Howe

about how much

ML taught Science, VIT

"New & Current

current Newswatch Times, & New Yorker

reads history

SL - First State

Jr League

Board at Lehigh Museum

ML - a runner

both son attend Porter Street

ML's business

partner in Lloyd

Person, CFO at

Columbia Business

SL knew of warning on pack

ML started running when he separated from second wife
regular church attendee

"to Martin" campaign in Charlotte; bronze statue

L. Hle:

amended complaint, July 7, 1999
Martin Little, deceased
died May 1, 1993

ML 6. April 30, 1995
wager smoking in a teenage
lung cancer, Dec '95

*6: defendants have known since before 1980 of
"beetle damage" / addiction, etc but have
disseminated "facts"

creation of TERC/CPR "front"
"false controversy"

Franklin statement
Cay Ad Code (1960s) irrelevant "doubt"

pushing to produce "safe" cig
low tar marketing - given false assurance
conspirators

long known role of nicotine
targeting of minors

defective -
prior to 1969
being freely

even companies should have
warned before 1969

strict liability claim
"risk inherent in design"

Direct

Martin Little - video testimony

born in Spartanburg, SC

also lived in CT

brother - sister lived in Charlotte

married to Seely for 15 yrs

her 2 sons, 18 & 9

Harvard Distribution Services / co-owner

some high school

started working at age 12 to 14

bought own at age 16

10,000 tons

in his function; switched for health reasons - ultimately to
Carlton

used other to his - mission frequent

quit several times, tried hypnosis, self talk

life-style change

a reason

used chemicals

know something was
happening (p. 22)

covered the labor of Carlton

works on cleaning out his basement

hunger strikes - percussive

Cross

father smoked or did mother, tried to act like an adult
living in CT at age 12

remember coffee machine - corner stick - constant health
issues

L. thought he couldn't get away
 "bulletproof"

needed to relax, to concentrate on focus
 and marijuana or cocaine, looked
 bad

married 3 times

Married son, Mark lives in Sanford, NC

L. doesn't know her address in North Carolina

Washington, Ruthless, lives in CA - doesn't know much about her

lived SE Post, Eastern District

know a number who died of lung cancer in early 1990s

under stand suggested him to do so.

married about 1980s

old channel's

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Bill for Work Done in August 1999 by:

Lacy K. Ford, Jr. (SSN# 249-80-1944)
205 King Charles Road
Columbia, SC 29209

re Little v. Reynolds

August 1-31

Research and Review	21 hrs at \$100	\$2100.00
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Total		<u>\$2100.00</u>
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in HUMPHREY

Bill for Work Done in September 1999 by:

Lacy K. Ford, Jr. (SSN# 249-80-1944)
205 King Charles Road
Columbia, SC 29209

re Little v. Reynolds

September 1-30:

Research and Review	13.5 hrs at \$100	\$1350.00
Total		\$1350.00

September 1999 Expenses for Lacy K. Ford, Jr.

re Little v. Reynolds

Total Expenses (September)	\$869.02
----------------------------	----------

Bill for Work Done in January 2000 by:

Lacy K. Ford, Jr. (SSN# 249-80-1944)
205 King Charles Road
Columbia, SC 29209

re Little v. Reynolds

January 1-31:

Research and Disclosure Preparation 9.5 hrs	\$950.00
---	----------

Sub-total	<u>\$950.00</u>
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January 2000 Expenses for Lacy K. Ford, Jr.

re Little v. Reynolds

Total Expenses (January)	\$237.15
--------------------------	----------

Bill for Work Done in February 2000 by:

Lacy K. Ford, Jr. (SSN# 249-80-1944)
205 King Charles Road
Columbia, SC 29209

re Little v. Reynolds

February 1-29:

Research and Review 8.5 hrs

\$850.00

Sub-total

\$850.00

Total Fees (February)

\$850.00

February 2000 Expenses for Lacy K. Ford, Jr.

re Little v. Reynolds

Total Expenses (February)

\$1040.69

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produced by RFTC

Prior Testimony of Lacy K. Ford, Ph.D.
in Smoking and Health cases:

Clark v. R.J. Reynolds, et al., No. 95-03333-CA (Fla. Cir. Ct., Duval County, Sep. 20, 1996)
(deposition).

Raulerson v. R.J. Reynolds Tobacco Company, No. 95-0182-CA (Fla. Cir. Ct., Duval County,
Apr. 28-30, 1997) (trial testimony).

Engle v. R.J. Reynolds Tobacco Company, et al., No. 94-08273CA (20) (Fla. Cir. Ct., Dade
County, Jul. 16, 1997) (deposition).

Karbiwnyk v. R.J. Reynolds Tobacco Company, No. 95-4697-CA (Fla. Cir. Ct., Duval County,
Sep. 26, 1997) (deposition).

Karbiwnyk v. R.J. Reynolds Tobacco Company, No. 95-4697-CA (Fla. Cir. Ct., Duval County,
Oct. 16-17, and 20, 1997) (trial testimony).

Engle v. R.J. Reynolds Tobacco Company, et al., No. 94-08273CA (20) (Fla. Cir. Ct., Dade
County, Apr. 26-28, 1999) (trial testimony).

Gilbey v. American Tobacco Company, et al., No. 314-002, Div. I (La. Dist. Ct., Jun. 30 and Jul.
1, 1999) (trial testimony)



9

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CURRICULUM VITA

Lacy K. Ford, Jr

Address:

Department of History
University of South Carolina
Columbia, SC 29208

Telephone: 803-777-7774

E-mail: Ford@gwm.sc.edu

CURRENT POSITION:

Professor of History
University of South Carolina

FIELDS OF INTEREST:

Nineteenth and Twentieth Century United States, The American South, Political Thought.

EDUCATION: University of South Carolina

Ph.D. in American History, August, 1983

Dissertation: "Social Origins of a New South Carolina: The Upcountry in the Nineteenth Century"

Skills: Quantitative Methods
Russian

Master of Arts in History, 1976

Bachelor of Arts, Magna Cum Laude, 1974

Major: History
Cognate: Economics

TEACHING EXPERIENCE:

University of South Carolina, Fall 1997 to present, Professor

University of South Carolina, 1990-1997, Associate Professor

University of South Carolina, 1984-1990, Assistant Professor



52119 9393

University of California-Berkeley, 1983-1984, Visiting Assistant Professor

AWARDS AND FELLOWSHIPS

National Endowment for the Humanities Research Fellow, 2000-2001 (Award notification received 12/99)

USC Research And Productive Scholarship Award (\$5700), 1996

South Carolina Historical Society Award for the best article published in the South Carolina Historical Magazine during the preceding year (1995).

American Philosophical Society Research and Travel Fellowship, 1994-95

Melton Summer Research Fellowship, Virginia Historical Society, 1993

American Council of Learned Societies Research Fellow, 1991-92

Robert D. Ochs Award, 1991. Award presented by the Graduate History Association of the University of South Carolina to a faculty member for outstanding support of the graduate program.

Donald Russell Award for Research in the Humanities and Social Sciences, 1990. Presented by the University of South Carolina for outstanding research by a faculty member.

Francis Butler Simkins Award, 1989. Presented by the Southern Historical Association for the best first book on Southern history published during the two preceding calendar years (1988 and 1989).

Louis Pelzer Memorial Award, 1983. Presented by the Organization of American Historians for the best essay on American history written by a graduate student during the preceding year.

National Endowment for the Humanities Research Fellow, 1986-1987

American Philosophical Society Research Fellow, Summer, 1986

USC Venture Fund Award, 1986

USC Research and Productive Scholarship, 1987-88

PUBLICATIONS

Books

Origins of Southern Radicalism: The South Carolina Upcountry, 1800-1860 (New York: Oxford University Press, 1988). Winner of the Francis B. Simkins Prize, 1988-1989. Now available in paperback (1991).

The Making of Southern Conservatism: The Evolution of Political Thought in the Jacksonian South (New York: Oxford University Press). Under Contract.

Articles and Essays

"Making the 'White Man's Country' White: Race and State Constitutions in the Jacksonian South," Journal of the Early Republic (Winter 2000, forthcoming). In Press.

"Democracy in the United States: From Revolution to Civil War," in Stuart Bruchey and Peter Coolidge, eds., Ideas, Ideologies and Social Movements: The U. S. Experience Since 1800 (Columbia, SC: University of South Carolina Press, 1999), 28-41, 194-195.

"The Popular Ideology of the Old South's Plain Folk: The Limits of Egalitarianism in a Slaveholding Society," in Samuel Hyde, ed., (with an introduction by John B. Boles), Plain Folk of the South Reconsidered (Baton Rouge and London: LSU Press, 1997), 205-227.

"Origins of the Edgefield Tradition: The Late Antebellum Experience and the Roots of Political Insurgency," South Carolina Historical Magazine 98 (October, 1997): 328-348.

"The Personable Journalist As Social Critic: Ben Robertson and the Early Twentieth Century South," Southern Cultures 4 (December, 1996): 353-373.

"Prophet With Posthumous Honor: John C. Calhoun and the Southern Political Tradition," in Charles Eagles, ed., Is There a Southern Political Tradition? (Jackson, MS: University Press of Mississippi, 1996), 3-25 and 207-211.

"John C. Calhoun," in Richard Fox and James Kloppenberg, eds., A Companion to American Thought (Oxford, UK: Blackwell Publishers, 1995), 249-251.

"The Tale of Two Entrepreneurs in the Old South: John Springs III and Hiram Hutchison of the South Carolina Upcountry," South Carolina Historical Magazine 95 (July 1994): 198-224. Winner of 1995 South Carolina Historical Society Award for best article.

"Inventing the Concurrent Majority: Madison, Calhoun and the Problem of Majoritarianism in American Political Thought," Journal of Southern History 60 (February 1994): 19-58.

"Frontier Democracy: The Turner Thesis Revisited," Journal of the Early Republic 13 (Summer 1993): 144-163.

The Conservative Mind of the Old South," Reviews in American History 21 (December 1993): 591-599.

"W.J. Cash and Continuity in Southern History: A Comment," in Charles W. Eagles, ed., "The Mind of the South": Fifty Years Later (Jackson, MS and London: University of Mississippi Press, 1992), pp. 101-111.

"Republics and Democracy: The Parameters of Political Citizenship in Antebellum South Carolina," in David R. Chesnut and Clyde N. Wilson, eds., The Meaning of South Carolina History: Essays in Honor of George C. Rogers, Jr. (Columbia, S.C.: University of South Carolina Press, 1991), pp. 121-145.

"Ben Robertson: An Introduction," in Ben Robertson, Red Hills and Cotton: An Upcountry Memory (Columbia, S.C.: University of South Carolina, 1991), ix-xliv. Southern Classics Series reprint of the original published in 1942 by Alfred A. Knopf.

"Toward a Divided Union," Reviews in American History 18 (September, 1990): 349-356.

"Ties That Bind," Reviews in American History 17 (March, 1989): 64-72.

"Recovering the Republic: Calhoun, South Carolina, and the Concurrent Majority," South Carolina Historical Magazine 89 (July, 1988): 146-159.

"Republican Ideology in a Slave Society: The Political Economy of John C. Calhoun," Journal of Southern History 54 (August, 1988): 405-424.

"The South Carolina Economy Reconstructed and Reconsidered: Structure, Output, and Performance, 1670-1985," in Winfred B. Moore, Joseph F. Tripp, and Lyon G. Tyler, Jr., eds., Developing Dixie: Modernization in a Traditional Society (New York: Greenwood Press, 1988), pp. 93-110. This article was co-authored with Peter A. Coclanis.

"Yeoman Farmers in the South Carolina Upcountry: Changing Production Patterns in the Late Antebellum Era," Agricultural History 60 (Fall, 1986): 17-37.

"James Louis Petigru: The Last South Carolina Federalist," in Michael O'Brien and

David Moltke-Hansen, eds., Intellectual Life in Antebellum Charleston (Knoxville: University of Tennessee Press, 1986), pp. 152-185.

"Self-Sufficiency, Cotton, and Economic Development in the South Carolina Upcountry, 1800-1860," Journal of Economic History 45 (June, 1985): 261-267.

"Rednecks and Merchants: Economic Development and Social Tensions in the South Carolina Upcountry, 1865-1900," Journal of American History 71 (September, 1984): 294-318. Winner of the OAH's Louis Pelzer Award, 1983.

"Liberty and Democracy in the Old South," Continuity (Fall, 1984): 214-219.

"Labor and Ideology: The Transition to Free Labor Agriculture in the South Carolina Upcountry, 1850-1890," in W.J. Fraser and W.B. Moore, eds., The Southern Enigma: Essays on Race, Class, and Folk Culture (Westport, CT: Greenwood Press, 1983), pp. 25-41.

Book Reviews

"Review of William G. Shade, Democratizing the Old Dominion: Virginia and the Second Party System, 1824-1861," Journal of American History 85 (June 1998): 230-240.

"Review of Bradley G. Bond, Political Culture in the Nineteenth Century South: Mississippi, 1830-1900," American Historical Review 103 (April 1998): 593-594.

"Review of Melvyn Stokes and Stephen Conway, eds., The Market Revolution in America: Social, Political and Religious Expressions," Georgia Historical Quarterly 82 (Spring 1998): 179-182.

"Review of George C. Rable, The Confederate Republic: A Revolution Against Politics," Southern Cultures 2 (Winter 1996): 397-400.

"Review of Irving Bartlett, John C. Calhoun: A Biography," Journal of Southern History 61 (August, 1995): 595-597.

"Review of Charles S. Bolton, Poor Whites in the Old South: Tenants and Laborers in Central North Carolina and Northeast Mississippi," Journal of American History 82 (June, 1995): 232-233.

"Review of David Ericson, The Shaping of American Liberalism and David Greenstone, The Lincoln Persuasion," Journal of Southern History 61 (February 1995): 136-138.

"Review of Shearer Davis Bowman, Masters and Lords: Mid-Nineteenth Century U.S. Planters and Prussian Junkers." American Historical Review 99 (December 1994): 1656-1657.

"Review of Joseph Persky, The Burden of Dependency: Colonial Themes in Southern Economic Thought." American Historical Review 99 (February 1994): 289-290.

"Review of Bill Cecil-Fronsman, Common Whites: Class and Culture in Antebellum North Carolina." Georgia Historical Quarterly 77 (Spring 1993): 179-182.

"Review of Charles R. Wilson and William Ferris, eds., Encyclopedia of Southern Culture." American Historical Review 96 (April 1991): 592-593.

"Review of Wayne K. Durrill, War of Another Kind: A Southern Community in the Great Rebellion." Journal of American History 78 (September 1991): 677-678.

"Review of William W. Freehling, The Road to Disunion: Secessionists at Bay, 1776-1854." Journal of Southern History 58 (February 1992): 119-123.

"Review of Rachel N. Klein, Unification of A Slave State: The Rise of the Planter Class in the South Carolina Backcountry, 1760-1808." Agricultural History 65 (Summer 1991): 115-117.

"Review of John B. Boles and Evelyn Nolen, eds., Interpreting Southern History: Historiographical Essays in Honor of Sanford W. Higginbotham." South Carolina Historical Magazine 91 (April 1990): 135-137.

"Review of Amina Waller, Feud: Hatfields, McCays, and Social Change in Appalachia, 1860-1900." Journal of Southern History 60 (November 1989): 724-726.

"Review of Laurence Shore, Southern Capitalists." Business History Review 62 (Spring 1988): 159-161.

"Review of Clyde N. Wilson, ed., The Papers of John C. Calhoun, volume 17." South Carolina Historical Magazine 89 (July 1988): 183-187.

"Review of John B. Edmunds, Jr., Francis W. Pickens and the Politics of Destruction." North Carolina Historical Review 64 (July 1987): 331-332.

"Review of Orville Vernon Burton, In My Father's House Are Many Mansions: Family and Community in Edgefield County, South Carolina." South Carolina Historical Magazine 87 (July 1986): 176-179.

"Review of J. William Harris, Plain Folk and Gentry in a Slave Society: White Liberty

and Black Slavery in Augusta's Hinterlands." Georgia Historical Quarterly 70 (Fall 1986): 552-555

Professional Service

Program Committee, Member, Southern Historical Association, 2001

Board of Editors, Journal of the Early Republic, 1999-2002

Chair, Program Committee, Southern Historical Association, 1997

Agricultural History Society, Executive Council, 1993-1998

Journal of Southern History, Board of Editors, 1990-1994

Agricultural History Society, Nominating Committee, 1990-1992 (Chair, 1992)

Southern Historical Association, Program Committee, 1990

Organization of American Historians, Avery Craven Prize Committee, 1986

University Service

President, USC Chapter of Phi Beta Kappa, 1994-95, 1995-96

Donald Russell Research Award Selection Committee, 1990-91, 1994-95

USC Faculty Senate, 1989-1991, 1994-95

USC Chapter of Phi Beta Kappa, Executive Council, 1988-1997

USC (Provost's) Legislative Liaison Committee, 1993 to present

USC Department of History, Executive Committee, 1992-1994 (Chair, 1993-94), 1995-97

USC Department of History, Director of Graduate Studies, 1995-1997

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To satisfy its obligations under Local Rule 26.09(B) for disclosing Lacy K. Ford, Ph.D., R.J.

Reynolds submits the expert report prepared by Dr. Ford himself for the Little case, a copy of which is attached hereto.

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EXPERT REPORT OF DR. LACY K. FORD, JR., PH.D.

I am a historian with a Ph.D. in American History and a Professor of History at the University of South Carolina. A copy of my *curriculum vitae* is attached. I expect to testify about the history of tobacco and tobacco use in the United States. I also expect to testify about the information disseminated to the general public regarding the possible health risks associated with cigarette smoking, including the claim that cigarette smoking, once started, could be difficult to quit, and about the extent of public awareness concerning these risks. I may also be asked to comment upon the opinions expressed by other witnesses in this matter to the extent that they relate to my area of expertise.

I expect to testify that, over the course of the past 100 years, and even before, there has been a vast amount of information disseminated to the general public from a wide variety of sources regarding the potential health risks associated with the use of tobacco. This topic has received extensive coverage nationally, regionally, and locally.

I also expect to testify that, throughout this century, information that cigarette smoking could be hazardous to health, that it could lead to serious injury, including death, and that, for some smokers, it could be difficult to quit, was widely disseminated to the general public and was common knowledge. This information was disseminated through a variety of means, including educational courses in the schools; the activities, educational campaigns, and publications of private health, civic and religious organizations; books; reports in newspapers, magazines, and other media, and, later, on television; activities and official literature of state and national governmental bodies; and various other sources.

Additionally, I expect to testify that, by approximately 1950, heightened public concern

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developed over the possible relationship between cigarette smoking and lung cancer. Debate within the scientific, medical, and public health communities regarding this issue received widespread coverage in the press and other media. Extensive coverage of the smoking and health issue continued throughout the 1950s and 1960s, and included intensive coverage of the 1964 report of the Surgeon General's Advisory Committee. Since 1964, the issue of smoking and health has continued to receive extensive coverage in a variety of public forums. All levels of government have engaged in increasing efforts to regulate the marketing, sale, and use of tobacco products. In addition, government and private organizations continued and intensified their educational and regulatory efforts.

I also expect to testify, based on the nature and extent of the information disseminated about the possible health risks of smoking, and based on such things as polling and survey data, media coverage, cigarette smoking prevalence, popular culture, and public and governmental reaction to this information, that the ordinary consumer with knowledge common to the community during the period of Samuel Martin Little's life would have been aware that cigarette smoking could be hazardous to health, that it could lead to serious injury, including emphysema, lung cancer and death, and that, for some smokers, it could be difficult to quit.

My opinions are based on my education, training, and experience as a historian as well as my review of information reasonably relied upon by members of my profession, including materials related to state education laws, curriculum guides, and school textbooks; national and regional newspapers, including the New York Times, the Washington Post, the Charleston News and Courier, the Charleston Evening Post, the Greenville News, the Greenville Piedmont, the Spartanburg Herald, the Spartanburg Journal, Charlotte Observer, and others; popular magazines, including Reader's Digest, Life, Newsweek, Time, and others; various television

programs, news broadcasts, and public health announcements, various books, pamphlets, articles and secondary literature relating to tobacco use and its possible health consequences; polling and survey data; U. S. Government documents and records relating to the use, sale, and possible health consequences of tobacco; state laws, statutes, and executive and legislative branch materials relating to the regulation and prohibition of the manufacture and sale of tobacco products; publications of various anti-smoking organizations; and various court decisions relating to the regulation and prohibition of the manufacture and sale of tobacco products. I have also reviewed the second amended complaint, plaintiffs' interrogatory responses, and the depositions of Samuel Martin Little and Suzanne Queeny Little, and my work and research in this matter is on-going.

My hourly rate for historical research is \$100 an hour.

In the past four years I have been deposed or testified in the following cases: *Clark v. Liggett Group, Inc.*, *Corner v. R. J. Reynolds Tobacco Company*, *Karbiwytz v. R. J. Reynolds Tobacco Company*, *Engle v. R. J. Reynolds Tobacco Company*, and *Gilboy v. the R. J. Reynolds Tobacco Company*.

8

HUMPHREY

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in

Reducing the Health Consequences of Smoking

25 YEARS OF PROGRESS

*a report of the
Surgeon General*

1989



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Centers for Disease Control
Center for Chronic Disease Prevention and Health Promotion
Office on Smoking and Health
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8

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TRENDS IN PUBLIC BELIEFS,
ATTITUDES, AND OPINIONS
ABOUT SMOKING

CHAPTER 4

HUMPHREY

in

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CONTENTS

The information presented in this Chapter is derived from three principal sources:

1. Nationally representative surveys conducted by the U.S. Public Health Service from 1964-87, including the Adult Use of Tobacco Surveys (AUTSs) (1964, 1966, 1970, 1975, 1986) and the National Health Interview Surveys (NHISs) (1983, 1987). The NHIS questions were part of the Health Promotion and Dis-

Data Sources

This Chapter analyzes trends in public beliefs, attitudes, and opinions about smoking. It is divided into three sections. The first describes trends in public beliefs regarding the health effects of smoking, the second describes trends in public attitudes about smokers and smoking, and the third describes trends in public opinion about smoking. At the outset, it is important to define and clarify the important terms used in this Chapter. Terms such as knowledge, awareness, opinions, beliefs, and attitudes have common-sense meanings to the lay person, but more complex meanings to the social scientist. For example, Allport (1935) reviewed many definitions of attitude and concluded that an attitude is a mental or neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related. Entire books have been devoted to the science of defining and measuring public attitudes, opinions, and beliefs (e.g., Oskamp 1977). For sections two and three of this Chapter, which deal with attitudes and opinions, the commonplace understanding of these terms will suffice. For the first section, however, which covers beliefs about health effects, a more careful approach is warranted. This Section generally follows the construct described by Fishbein (1977), which embraces three levels of belief:

1. Level 1 (awareness): A person may believe that "the Surgeon General has determined that cigarette smoking is dangerous to health."
2. Level 2 (general acceptance): A person may believe that "cigarette smoking is dangerous to health."
3. Level 3 (personalized acceptance): A person may believe that "my cigarette smoking is dangerous to my health."

Most of the survey data presented in the first section address Level 2 beliefs. At times, the term public knowledge is used to refer to public beliefs (Level 2 beliefs at the population level). There are few data regarding Level 1 beliefs; consequently, use of the terms awareness and public awareness is generally avoided. Data pertaining to Level 3 beliefs are available from a few surveys in three formats: (1) questions asking whether smoking "is harmful to your health"; (2) questions asking whether respondents believe that they are less likely, as likely, or more likely than other people to be adversely affected by smoking. These levels of beliefs are discussed in more depth later in this Chapter.

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case Prevention Supplement in 1985 and the Cancer Control Supplement in 1987. The surveys for 1964-75 used, for the most part, the same methods and questionnaire wording. Different methods and questionnaires were used in subsequent surveys.

- Nationally representative surveys conducted by private organizations, such as Gallup and Roper, and sponsored by various organizations.
- National surveys of population subgroups or local surveys. These surveys were used, for the most part, only when nationally representative data were unavailable.

Data from these surveys are presented in several tables throughout this Chapter, and of which addresses beliefs or opinions about a particular smoking-related problem or policy. When one of the primary data sources is e.g., the AUSTS, it must be noted in a table, it is because the relevant question was not asked in the survey of survey year or because the data were not available.

Preliminary first-quarter estimates from the Cancer Control Supplement to the 1987 NHIS are provided in some tables (unpublished data, National Cancer Institute). These data are unweighted. When available, year-end weighted data are cited; in all cases, these figures are very similar to the first-quarter estimates.

The surveys used in this Chapter and in Chapter 5 are described in the Appendix to this Chapter. Table 1 provides basic information about the survey methodology. The amounts of information provided for the different surveys vary because certain

TABLE 1.—Methodology of surveys

Survey	Survey firm	Sample size	Age (years)	Response rate (%)	Model ^a
AUTS 1964	National Analytics	5,794	221	76	P
AUTS 1966	National Analytics Opinion Research	5,768		72	P T ^b
AUTS 1970	Chilton	5,200	221		T (1967) T (1974)
AUTS 1975	Chilton	12,000			T (1969) T (1975)
Roper 1978	Roper	2,511			P
NHIS 1985	Quinn Bureau	33,630	218	90	P
AUTS 1986	Winick	13,031	217	74	T
AMA 1986	Kane, Parsons	1,500			T
AMA 1987	Kane, Parsons	1,500			T
MCT ^c 1975-87	University of Michigan		18		Q

^aPersonal interviews; T, telephone interviews; Q, self-administered questionnaire.

^bNonrespondents to personal interviews.

^cMultiplumate household.

^dMonitoring the Future Project, survey of high school seniors.

methodological details were available for some surveys but not for others. Additional information on the methodology of these surveys has been published elsewhere (Massey et al. 1987).

Issues in Comparing Surveys

When assessing trends from different surveys conducted at different times by different organizations, it is important to consider the following caveats. The response to each specific question depends upon multiple factors, including the mode of data collection (e.g., in-person versus telephone), the sociodemographic representativeness of the sample, the exact wording of the question (e.g., bold, direct, leading questions versus conversational questions), the type of response allowed or requested (e.g., year-versus closed-ended questions), the order of questions within the survey, and the content and nature of the rest of the survey (e.g., a survey specifically addressing smoking versus another of a general topic). Even minor changes in the survey methods or questionnaire wording may lead to markedly discrepant results for a specific question.

Additional precautions exist when interpreting surveys that assess public knowledge. When asked a knowledge question, respondents may attempt to answer it "correctly" in order to please the interviewer. The Health Promotion and Disease Prevention Supplement to the 1983 NHIS sheds light on this question. In this survey (NHIS 1986), respondents were asked whether smoking increases the risk of developing cancers and all bladder disease—two conditions not associated with smoking. The extent to which these types of questions (sometimes called "red herrings") are answered in the affirmative (and thus incorrectly) may reflect the respondents' general tendency to respond in the affirmative. More than 85 percent of respondents reported that smoking causes emphysema, chronic bronchitis, and laryngeal, esophageal, and lung cancer; however, 11 percent and 16 percent reported that smoking causes gallstones and cataracts, respectively. The responses indicating a connection between smoking and cataracts or gall bladder disease may represent misinformed beliefs or a bias from attempting to answer knowledge questions "correctly." There are other possible explanations, however. For instance, these responses (as well as other "correct" responses) may represent inferences that respondents have made, in some cases regarding questions they have never thought about. In these cases, some persons may be inclined to infer a connection between a known risk behavior and any disease outcome.

In the case of questions about public knowledge (e.g., "Do you think that smoking is or is not a cause of lung cancer?"), the "don't know" response should be included in the denominator when calculating the proportion of the population that believes a particular fact. This process was used for calculating unpublished data presented below. When two surveys produce unexpected or discrepant results, a close inspection of the methods often explains the findings. Two examples involve surveys of public opinion about smoking policies. In one case, two separate national surveys conducted in 1986 regarding support for a ban on cigarette advertising provided apparently discrepant results (American Medical Association (AMA) 1986). A careful review of the questionnaire wording revealed marked differences in the remarks made just prior to each question. In a survey conducted for AMA, respondents were first informed about

AMA's support of a policy to ban advertising—67 percent subsequently responded that they were in favor of such a ban. In addition, a survey conducted by the American Cancer Society (ACS), the American Heart Association (AHA), and the American Lung Association (ALA) respondents were first informed that "some people feel that as long as cigarettes are legal, cigarette advertising should be permitted. Others feel that cigarette advertising should not be permitted." Thirty-three percent subsequently responded that cigarette companies should not be permitted to advertise in newspapers and magazines.

There are at least three reasons these questions might be expected to evoke different responses. First, the wording prior to each question may have biased the respondents—one to align with the sponsoring agency's policy and the other to consider the implications of such a ban. Second, the first survey asked whether cigarette advertising should be banned while the second asked whether cigarette advertising should be permitted. To the extent that some respondents may have a general inclination to answer in the affirmative, such wording differences could influence the results. Third, the word "ban" may have negative connotations for some respondents. Two national surveys (including one sponsored by AMA) conducted 1 year later, which provided no introductory comments, found that 49 percent of adults (Gallup 1987a) and 55 percent of adults (Harvey and Stubbs 1987) were in favor of a ban on tobacco advertising (see Table 31).

A second example involves two surveys conducted in Michigan in 1986 regarding public opinion on smoking in public places (Perlsouth and Holmes 1987). A survey sponsored by the affiliates of ALA and AHA in Michigan revealed that 82 percent of adults favored restrictions on smoking in public places. In contrast, a survey conducted 2 months later and sponsored by the Michigan Tobacco and Candy Distributors and Vendors Association indicated that 82 percent of the public thought the legislature should refrain from further legislation restricting smoking. After assessing the survey methods and questionnaires, the Michigan Department of Public Health concluded the markedly different questionnaire wording and survey methods accounted for the discrepant results.

To assist in the interpretation of the data presented in this Report, data sources as described in Table 1 and in the Appendix to this Chapter, and the exact (or approximate) question wording and response choices are provided as a footnote to each table when available. Response choices, when obvious, are often omitted (e.g., simple yes-no questions). Although the same question wording may be used in different surveys, other factors may have important effects on the responses. The reader should therefore interpret with caution observed differences and trends presented in this Chapter because many of the potential factors that may affect responses are not known.

Trends in Public Beliefs About the Health Effects of Smoking

Overview

The health consequences of smoking are well documented and widely acknowledged in the scientific literature (see Chapter 2 in this Report). In 1964, the Surgeon General's Advisory Committee on Smoking and Health, after an extensive review of the literature, reported that cigarette smoking was causally associated with lung and laryngeal cancer in men, was the most important cause of chronic bronchitis, and was associated with esophageal cancer, bladder cancer, coronary artery disease, emphysema, peptic ulcers, and low birth-weight babies (USPHS 1964).

During the 25-year period since 1964, subsequent reports of the Surgeon General have pointed out and expanded the findings of the Advisory Committee. The purpose of this Section is to determine the extent to which this information has been disseminated and accepted by the U.S. public. Public knowledge of the health risks of smoking can be considered under three broad categories: whether smoking is harmful to health in general and whether smokers perceive themselves to be at risk from smoking, as well as the magnitude of risk from smoking and how this compares to other health risks. Because health concerns and risks among adolescents differ from those of adults, we have addressed surveys of their knowledge under a separate heading.

For each specific known health risk noted, the section below includes: (1) a description of the known medical or scientific facts; that is, a brief summary of the information known about the health risk (see Chapter 2 for a more detailed description of the information about health risks); (2) a report on the trends in the public's knowledge of this fact (if available); and (3) a brief description of the current status of knowledge with respect to smoking status. This Section concludes with a summary of the important gains in knowledge, the gaps that remain, the factors that may promote or interfere with change, and the relationship between these trends and the 1990 Health Objectives for the Nation.

In a few cases, published studies have analyzed public knowledge or beliefs by sociodemographic groupings (NCJHS 1988; Fohren et al. 1988; Fox et al. 1987; Daynard and Brown 1987; Duback et al. 1985). Because these analyses were available only occasionally, and because some of these studies did not control for smoking status, sociodemographic correlation data are not presented below. Because smoking status and socioeconomic status are inversely correlated (Chapter 3), differences in public knowledge or beliefs according to smoking status may reflect differences in socioeconomic status.

Cigarette Smoking Harmful to Smokers in General?

In 1964, 81 percent of adults strongly or mildly agreed that smoking is harmful to health (Table 2). An identical series of questions asked in the AHTS from 1964–75 demonstrated an increase in this belief to 90 percent of adults. Public knowledge on this question increased during this period among current smokers (70 to 81 percent), as well as among never smokers (89 to 95 percent).

TABLE 2.—Trends in public beliefs regarding the relative hazards of different cigarette brands, 1970, 1975, 1986

	Percentage of current smokers		
	1970	1975	1986
Ranking of cigarettes are probably more hazardous than others			
Rank 1 (smoke probably more hazardous than others)	(6)	(10)	(8)
Rank 2 (smoke probably less hazardous than others)	(25)	(25)	(21)
Rank 3 (smoke probably about the same as others)	(14)	(14)	(13)
Don't know or not stated if same are hazardous	(2)	(2)	(2)
Don't know or not stated if same are hazardous	47	51	45
All cigarettes are probably about equally hazardous	43	41	50
Cigarettes are probably not hazardous to health at all	4	5	2
Don't know or not stated if same are hazardous	6	4	3
Total	100	100	100

"The word 'probably' was not used in the 1986 AUSTS. The wording in the three surveys was otherwise similar."
SOURCE: AUSTS 1970, 1975, 1986 (US DHEW 1973, 1976a, US DHEW, in press).

Although smokers and nonsmokers acknowledge the health risks from smoking, certain types of smoking (such as light smoking or smoking low-tar cigarettes) or smoking for a limited period of time may be perceived as less hazardous. In general, there are few data to assess the degree to which these beliefs are held. According to the AUSTS in 1970, 1975, and 1986, 45 to 50 percent of current smokers believed that "one kind of cigarettes are probably more hazardous than others," 40 to 50 percent believed that "all cigarettes are probably about equally hazardous," and 5 percent or less believed that "cigarettes are probably not hazardous to health at all" (Table 3). More specific data are reviewed below.

Heavy Versus Light Smoking

A large body of evidence has shown that light smoking, that is, 1 to 9 cigarettes per day, is associated with a significantly increased risk of overall morbidity and mortality from lung cancer, chronic obstructive pulmonary disease (COPD), heart disease, and other smoking-related diseases compared with never smoking (US DHEW 1979a; US DHEW 1982, 1983, 1984).

Between 1970 and 1978, national surveys conducted by the Roper Organization addressed beliefs regarding the health risks of heavy versus light smoking (FTC 1981). Respondents were asked how hazardous smoking is and were given three possible responses: any amount, only heavy smoking, and not hazardous. In 1970, 45 percent of respondents considered only heavy smoking to be hazardous (Table 4); by 1978, 31

TABLE 2.—Trends in public knowledge about smoking and health

Survey	Year	Reference	Current smokers	Former smokers	Never smokers	All non-smokers	All adults
1. AUSTS ¹	1964	US DHEW 1969	70	91	89	89	81
2. AUSTS ²	1966	US DHEW 1969	78	89	89	89	85
3. AUSTS ³	1970	US DHEW 1973	79	92	92	92	87
4. AUSTS ⁴	1975	US DHEW 1976a	81	95	95	95	90

¹Percentage includes those who "strongly agree" or "mildly agree."

NOTES: AUSTS = AUSTS.

1. Smoking cigarettes is harmful to health (strongly agree, mildly agree, no opinion, mildly disagree, strongly disagree).
2. Cigarette smoking is harmful to health (strongly agree, mildly agree, no opinion, mildly disagree, strongly disagree).
3. Smoking cigarettes is harmful to health (strongly agree, mildly agree, no opinion, mildly disagree, strongly disagree).
4. Smoking cigarettes is harmful to health (strongly agree, mildly agree, no opinion, mildly disagree, strongly disagree).

TABLE 4.—Trends in public knowledge about the health hazards of smoking

Survey	Year	Reference	What amount of smoking is hazardous to health? ^a (percentages who responded for each amount)			
			Any amount	Only heavy smoking	Not hazardous	Don't know
1. Roper	1970	Roper 1978	47	43	3	3
2. Roper	1972	Roper 1978	48	42	6	4
3. Roper	1974	Roper 1978	54	39	4	3
4. Roper	1976	Roper 1978	54	38	4	4
5. Roper	1978	Roper 1978	61	31	3	4
6. AUTS	1984	US DHHS, in press	72	20		5 (current smokers)
			81	13		4 (former smokers)
			83	11		4 (never smokers)

^a Respondents were allowed to choose only one answer. The "not hazardous" response was not available for the AUTS.

^b Percentages of responses in Roper surveys refer to all respondents; in AUTS 1984, percentages represent current, former, and never smokers, respectively.

NOTE: Actual questions:

1-5. How hazardous is smoking? (any amount, only heavy smoking, not hazardous, don't know.)

6. Do you think that only heavy smoking is hazardous or that any smoking is hazardous? (only heavy smoking, any smoking, don't know.)

Tar Yield

Studies have shown that smoking filtered lower tar cigarettes reduces the risk of lung cancer compared with smoking unfiltered higher tar cigarettes. However, there is no conclusive evidence that the lower yield cigarettes are associated with reduced risk of overall mortality, cancers other than lung, COPD, or heart disease. Moreover, compulsory smoking behavior in response to lower nicotine intake might actually increase the intake of tobacco smoke toxins in some individuals (US DHHS 1981).

Very few surveys have assessed the perceived harmfulness of low-tar cigarettes versus high-tar cigarettes or never smoking. In the 1980 Roper Survey (FIC 1981), respondents were presented with the following false statement: "It has been proven that smoking low-tar, low-nicotine cigarettes does not significantly increase a person's risk of disease over that of a non smoker." Nine percent of smokers said they "know it's true," 21 percent said they "think it's true," and 32 percent said they did not know if it was true or not. The complicated wording of this question and one of the word "proven" make interpretation of these results difficult. Different results may have been obtained using a question such as, "Do you believe that smoking low-tar cigarettes is or is not harmful to health?"

The 1980 Roper survey also asked respondents their beliefs about the following statement: "Even if a woman smokes low tar, low nicotine cigarettes during pregnancy, the still significantly increases her risk of losing the baby before or during birth." Forty-three percent of all respondents and 37 percent of smokers said they "know it's true" or "think it's true" (unpublished data, FIC).

The 1987 NHIS asked respondents if they believed that "People who smoke low tar and nicotine cigarettes are less likely to get cancer than people who smoke high tar and nicotine cigarettes." A total of 30 percent agreed with the statement whereas 50 percent disagreed (year-end data).

Foltson and associates (1988) surveyed 1,252 blacks (aged 35 to 74 years) and 1,870 whites in the metropolitan Minneapolis-St. Paul area during 1985-86. Respondents were presented with the following statement: "If tar and nicotine were removed from cigarettes, there would be no other chemicals in tobacco smoke that cause disease."

When asked, "How many cigarettes a day do you think a person would have to smoke before it would affect their (sic) health?" 49 percent of current smokers and 40 percent of never smokers cited 10 or more (Table 5), thus failing to recognize light smoking as a health risk. Twenty percent of current smokers cited 25 or more cigarettes as the minimum number necessary for adverse health effects (Table 5), which is identical to the proportion of current smokers who indicated, in response to the prior question, that only heavy smoking is hazardous to health (Table 4).

TABLE 5.—Public knowledge about the health hazards of smoking in relation to daily cigarette consumption, 1986

How many cigarettes a day you think a person would have to smoke before it would affect their health? (percentages indicating the following number of cigarettes per day)

	1	2-4	5-9	10-14	15-24	25-39	≥40	Don't know
Current smokers	14	4	8	12	17	3	17	25
Former smokers	17	6	10	13	19	2	9	22
Never smokers	21	9	10	11	19	1	9	20

The question was open ended. Responses were grouped in the categories 1-9, 10-24, and ≥25 cigarettes per day to conform to the common definitions of light, moderate, and heavy smoking.

SOURCE: AUTS 1986 (US DHHS, in press)

Percentages of those correctly identifying this statement as false were 59 percent of black men, 76 percent of white men, 69 percent of black women, and 60 percent of white women. Those who considered the statement to be true may believe low-tar and nicotine cigarettes to be less hazardous.

Duration of Smoking

Overall mortality ratios for smokers compared with nonsmokers increase with the duration of smoking. Overall mortality rates among smokers are slightly above the ratios of nonsmokers for the first 5 to 15 years of smoking but then increase more rapidly with years of smoking increase (US DEW 1979a). Mortality ratios for lung cancer, coronary heart disease (CHD), and COPD increase with decreasing age of initiation (US DHHS 1982, 1983, 1986). An increased risk of morbidity (e.g., as measured by days of hospitalization, bed disability, and work loss) among smokers may occur much earlier than increases in mortality ratios.

The 1964 AUTS asked respondents, "How many cigarettes a day (or how many years) make a cigarette smoker more likely to get lung cancer?" Most of those who considered smoking to be a cause of lung cancer believed that smoking would increase the risk of lung cancer only after at least 10 years of smoking (regardless of the number of cigarettes smoked per day) (Table 6).

The 1986 AUTS asked respondents, "How long would a person have to smoke (number of cigarettes each day before it would affect their (sic) health?" The number of cigarettes used in this question was the number identified by the respondent (on the previous question) as that which "a person would have to smoke before it would affect their (sic) health" (see Table 5). A majority of respondents in all smoking categories believed that smoking 10 or fewer years would affect a person's health. A higher percentage of never smokers (36 percent) than current smokers (23 percent) believed that smoking less than 1 year would affect a person's health. Correspondingly, a slightly higher percentage of current smokers (10 percent) than never smokers (5 percent) believed that health effects would occur only after at least 15 years of smoking (Table 7).

The wording in these two questions from the 1964 and 1986 AUTS is substantially different, making any comparison difficult. In particular, the 1986 question may have favored responses indicating a shorter duration of smoking by referring to general effects on health (which could be interpreted as nothing more than a cough) whereas the 1964 question asked about the risk of lung cancer.

Does Cigarette Smoking Cause Lung Cancer?

Lung cancer, first correlated with smoking more than 50 years ago, is the single largest contributor to the total cancer death rate (US DHHS 1982). Lung cancer alone accounted for an estimated 139,000 (23 percent) of the estimated 494,000 total cancer deaths in the United States in 1983 (ACS 1983a). It is estimated that cigarette smoking

TABLE 6.—Public beliefs about the health effects of smoking in relation to duration of smoking, 1964

How many cigarettes a day for how many years might make a cigarette smoker more likely to get lung cancer?
(percentage indicating the following number of years)

	5-9	10-19	20-29	30	Don't know/ no answer	Smokers not more likely to get lung cancer
Current smokers	10	12	12	11	10	43
Former smokers	17	17	16	14	14	22
Never smokers	17	16	10	13	19	24

* Asked only of those who indicated in the previous survey question that smokers are more likely than nonsmokers to develop lung cancer. The denominators for these percentages include respondents.
*No. of number of cigarettes per day
SOURCE: AULTS 1964 (US DHHS 1969)

TABLE 7.—Public beliefs about the health effects of smoking in relation to duration of smoking, 1966

How long would a person have to smoke (number) cigarettes "each day before it would affect their health?"
(percentage indicating the following years of smoking)

	<1	1-2	3-5	6-10	11-15	16-20	21-25	Never	Don't know
Current smokers	23	15	10	8	3	10	0.6	0.6	29
Former smokers	24	13	13	10	3	9	0.4	0.4	29
Never smokers	36	16	10	6	2	3	0.1	0.1	23

*The number of cigarettes used in this question was the number identified by the respondent (in the previous survey question) as that which "a person would have to smoke before it would affect their health." (See Table 6).
SOURCE: AULTS 1966 (US DHHS, in press)

(see Chapter 3).

Surveys have addressed public knowledge about the relationship between smoking and lung cancer since 1954. In 1954, fewer than half of adults (41 percent) thought that smoking is one of the causes of lung cancer (Table 8). Since that time, public knowledge of the association between smoking and lung cancer has increased steadily. By 1964, a majority of adults (66 percent) believed that smoking causes lung cancer; surveys in 1985, 1986, and 1987 showed that this proportion had increased to between 87 and 95 percent.

Heart Disease?

The 1964 Report of the Surgeon General's Advisory Committee identified an association between smoking and CHD, although it did not consider the available data to be sufficient to establish a causal relationship (US PHS 1964). Since that time, evidence from numerous investigations has established cigarette smoking as the most important modifiable risk factor for CHD in the United States (US DHHS 1983). Cigarette smoking increases the risk of death from CHD approximately threefold in persons less than 65 years old and is responsible for 40 to 45 percent of CHD deaths in this age group (Chapter 3).

Public beliefs that smoking is associated with the risk of CHD have steadily increased since 1964, when fewer than half of adults (40 percent) thought that smokers were more likely than nonsmokers to develop heart disease (Table 9). Surveys in 1985, 1986, and 1987 showed that 77 to 90 percent of adults believed that smoking increases the risk of developing heart disease. Each of these recent surveys showed that current smokers were less likely to have this belief than former and never smokers.

In 1986, current smokers were less likely to acknowledge a relationship between smoking and heart disease (71 percent) than were former smokers (84 percent) and never smokers (80 percent).

Chronic Obstructive Pulmonary Disease?

The 1964 Report of the Surgeon General's Advisory Committee identified cigarette smoking as the most important cause of chronic bronchitis (US PHS 1964). Today, cigarette smoking has been identified as the major cause of chronic bronchitis and emphysema in the United States. Eighty to eighty-five percent of deaths from COPD are attributed to cigarette smoking (Chapter 3; also see US DHHS 1984).

Since 1964, the public belief that smoking is associated with an increased risk of COPD has increased. In 1964, half of adults (50 percent) thought that smokers were more likely to get chronic bronchitis and emphysema (Table 10). By 1986, most adults thought that cigarette smokers were more likely than nonsmokers to develop chronic bronchitis (81 percent) and emphysema (89 percent). The preliminary first-quarter 1987 NHIS estimates were similar.

In three surveys that asked identical questions regarding emphysema and chronic bronchitis (NHIS 1985 and 1987, AUTS 1986), there were consistent slightly higher proportions who believed that smoking is associated with emphysema compared with chronic bronchitis.

In 1986, smokers were less likely to acknowledge an association between smoking and chronic bronchitis (73 percent) than were former smokers (84 percent) and never

TABLE 8.—Trends in public knowledge about smoking and lung cancer

Survey	Year	Reference	Cigarette smoking causes lung cancer (percentage who agree by smoking status)				All adults
			Current smokers	Former smokers	Never smokers	All nonsmokers	
1 Gallup	1954	Gallup 1981					41
2 Gallup	1957	Gallup 1981					44
3 Gallup	1958	Gallup 1981					44
4 AUTS	1964	US DHEW 1969	53	75	75	75	64
5 AUTS	1966	US DHEW 1969	57	79	70	72	66
6 Gallup	1969	Gallup 1981					71
7 Gallup	1971	Gallup 1981					71
8 Gallup	1977	Gallup 1981					81
9 Gallup	1978	Gallup 1978	72			87	81
10 Gallup	1981	Gallup 1981	69			91	83

TABLE 8.—Continued

Survey	Year	Reference	Current smokers	Former smokers	Never smokers	All non-smokers	All adults
11 NHIS	1985	NCHS 1986 ^a	92	96	96	96	96
12. AUTS	1986	US DHHS, in press	85	94	95	95	92
13 Gallup	1987	ALA 1987	75	90	94	94	87
14 NHIS ^b	1987		83	92	92	92	89

^aAnd unpublished data^bPreliminary first-quarter data (unpublished). Year-end percentages for all adults in 85 percent.

NOTE. Actual questions.

1-3 Do you think that cigarette smoking is or is not one of the causes of lung cancer? (yes, no, no opinion)

4-5 Would you say that cigarette smoking is definitely, probably, or definitely not a major cause of lung cancer, or that you have no opinion either way?

6-10 Do you think that cigarette smoking is or is not one of the causes of lung cancer? (yes, no, no opinion)

11 Tell me if you think cigarette smoking definitely increases, probably increases, probably decreases, or definitely does not increase a person's chances of getting the following problems:

12 Do you think a person who smokes is any more likely to get lung cancer than a person who doesn't smoke? (much more likely, somewhat more likely, no, don't know)

13 Do you think smoking is a cause of lung cancer? (yes, no, don't know)

14 People have different beliefs about the relationship between smoking and health. Do you believe cigarette smoking is related to lung cancer?

Percentages include those who believe smoking is "definitely" or "probably" a major cause of lung cancer

Percentages include those who believe smoking is "definitely" or "probably" increases the risk

Percentages include those who believe smokers are "much more likely" or "somewhat more likely" to get lung cancer

TABLE 9.—Trends in public knowledge about smoking and heart disease

Survey	Year	Reference	Current smokers	Former smokers	Never smokers	All non-smokers	All adults
1 AUTS	1964	US DHHS 1969	32	31	46	46	46
2 AUTS	1966	US DHHS 1969	33	33	43	47	46
3 AUTS	1966	US DHHS 1969	46	65	58	60	54
4 Gallup	1969	Gallup 1981					60
5 Gallup	1977	Gallup 1981					64
6 Gallup	1978	Gallup 1978	63			72	64
7 Gallup	1981	Gallup 1981	59			82	74
8 NHIS	1985	NCHS 1986	84	93	92	92	88
9 AUTS	1986	US DHHS, in press	71	84	80	81	78

TABLE 9.—Continued

Survey	Year	Reference	Current smokers	Former smokers	Never smokers	All non-smokers	All adults
10 NHIS ^a	1987		73	82	77		77

Smoking cigarettes causes heart disease (percentage who agree by smoking status)

^a Preliminary first-quarter data (unpublished). Year-end percentages for all adults in 76 percent

NOTE: Actual questions

- 1-2. Do you think the chances of getting coronary heart disease are the same for people who don't smoke cigarettes as they are for people who do smoke cigarettes? Who would be more likely to get it, people who don't smoke cigarettes or people who do smoke cigarettes?
3. Cigarette smokers are more likely to die from heart disease than people who don't smoke cigarettes (strongly agree, mildly disagree, strongly disagree)
- 4-7. Do you think that cigarette smoking is or is not one of the causes of heart disease?
8. Do you think cigarette smoking definitely increases, probably increases, probably decreases, or doesn't increase a person's chances of getting heart disease?
9. Do you think a person who smokes is any more likely to get heart disease than a person who doesn't smoke? (much more likely, some more likely, no, don't know)
10. People have different beliefs about the relationship between smoking and health. Do you believe cigarette smoking is related to heart disease?
- Percentages include those who believe smokers are "much more likely" or "somewhat more likely" to get heart disease
- Percentages include those who believe that smoking "definitely" or "probably" increases the risk
- Percentages include those who "strongly agree" or "mildly agree."

TABLE 10.—Trends in public knowledge about smoking and emphysema or chronic bronchitis

Survey	Year	Reference	Current smokers	Former smokers	Never smokers	All non-smokers	All adults
1. AUI3	1964	US DHEW 1969	43	60	55	56	50
2. AUI3	1966	US DHEW 1969	46	60	52	54	51
3. NHIS ^a	1983	NCHS 1986 ^b	89	94	91	92	91
4. AUI3	1986	US DHS, in press	83	92	90	91	89
5. Gallup	1987	ALA 1987	75	91		90	85
6. NHIS ^a	1987		79	87	84		84
7. AUI3	1966	US DHEW 1969	50	56	65	56	59
8. NHIS	1983	NCHS 1986 ^b	82	89	88	88	86

Smoking is a cause of emphysema/chronic bronchitis

Smoking is a cause of emphysema

Smoking is a cause of chronic bronchitis

Percentage who agree by smoking status

Produced by RIRTC

Produced by RIRTC

TABLE 10.—Continued

Survey	Year	Reference	US DHHS, in press	1986	1987	10 NHIS ^a
		Current smokers	73		71	
		Former smokers	84		81	
		Never smokers	83		79	
		All smokers	84			
		All adults				
Percentage who agree by smoking status						
NOTE. Actual questions						
1-2. Do you think the chances of getting emphysema are the same for people who don't smoke cigarettes as they are for people who do smoke cigarettes? "Who would be more likely to get it, people who don't smoke cigarettes or people who do smoke cigarettes?"						
3. Tell me if you think cigarette smoking definitely increases, probably increases, probably does not, or definitely does not increase a person's chances of getting the following problem:						
4. Do you think that smoking is a cause of emphysema? (Yes, no, don't know)						
5. Do you believe cigarette smoking is related to emphysema?						
6. Cigarette smoking causes chronic bronchitis. (Strongly agree, mildly agree, no opinion, mildly disagree, strongly disagree)						
7. Tell me if you think cigarette smoking definitely increases, probably increases, probably does not, or definitely does not increase a person's chances of getting the following problem:						
8. Do you think a person who smokes is any more likely to get emphysema than a person who doesn't smoke? (much more likely, probably more likely, no, don't know)						
9. Do you think a person who smokes is any more likely to get chronic bronchitis than a person who doesn't smoke? (much more likely, probably more likely, no, don't know)						
10. People have different beliefs about the relationship between smoking and health. Do you believe cigarette smoking is related to chronic bronchitis?						
Percentages include those who believe that smoking "definitely" or "probably" increases the risk						
Percentages include those who believe smokers are "much more likely" or "somewhat more likely" to get the disease						
Percentages include those who agree "strongly" or "mildly agree"						
Percentages include those who believe that smokers are more likely to get emphysema and chronic bronchitis						

is (83 percent). Similarly, smokers were less likely to acknowledge an association between smoking and emphysema (83 percent) than were former smokers (92 percent) and never smokers (99 percent). Similar patterns were seen in the earlier surveys.

Other Cancers?

Laryngeal and esophageal cancer: By 1964, smoking was identified as a cause of laryngeal cancer in men; an association between smoking and cancer of the esophagus was also noted, although the data were not considered sufficient to establish a causal relationship at that time (US PHS 1964). An estimated 75 to 90 percent of laryngeal and esophageal cancer deaths are attributed to smoking, and smokers have mortality rates from these diseases that are approximately 8 to 18 times higher than those of never smokers (Chapter 3).

Since 1977, public beliefs that smoking increases the risk of developing cancer of the larynx and esophagus have not changed substantially (Table 11). In 1977, 79 percent of adults reported that smoking is one of the causes of throat cancer. In 1985, 80 percent of adults thought that smoking increases a person's risk of developing esophageal cancer and 88 percent thought that smoking increases the risk of acquiring laryngeal cancer. Use of different wording to describe the cancer site (throat, laryngeal, esophageal, "mouth and throat") makes comparisons among these surveys difficult.

In 1986, current smokers were less likely to acknowledge a relationship between smoking and laryngeal cancer (82 percent) than were former smokers (91 percent) or never smokers (91 percent). Similar patterns were seen in the earlier surveys and in the preliminary 1987 NHIS data (Table 11).

Bladder cancer: The 1964 Report of the Surgeon General's Advisory Committee identified an association between smoking and cancer of the bladder, although the evidence was not considered sufficient to establish a causal relationship (US PHS 1964). Thirty-seven to forty-seven percent of bladder cancer deaths are now attributable to smoking (Chapter 3).

Few data are available on public knowledge about the association between smoking and cancer of the bladder. The 1979 Chilton Survey (Chilton 1980) showed that 25 percent of adult respondents (29 to 31 years of age) believed that "cancer of the bladder (has) been found to be associated with cigarette smoking." In the 1985 NHIS, 36 percent of adults thought that cigarette smoking definitely or probably increases a person's risk of developing bladder cancer. In the 1986 AUTS, 33 percent of adults thought that smokers are more likely than nonsmokers to develop bladder cancer. Current smokers were less likely to acknowledge this relationship (25 percent) than were former smokers (32 percent) and never smokers (38 percent).

What Are the Special Health Risks for Women?

The special health risks for women include effects of smoking on pregnancy outcome, increased risk of cardiovascular disease (CVD) among smokers who use oral contraceptives, and increased risk of cervical cancer in women who smoke (Chapters 2 and 3). Data exist on public beliefs regarding the first two of these three categories of risk.

TABLE 11.—Trends in public knowledge about smoking and cancer of the mouth/throat/larynx/esophagus

Smoking causes cancer of the mouth/throat/larynx/esophagus (percentage who agree by smoking status)		Survey		Reference		Year		NOTE: Actual questions	
All adults	Never smokers	Former smokers	Current smokers	All adults	Never smokers	Former smokers	Current smokers	1 Gallup 1977	2 Gallup 1978
79	82	87	83	73	75	82	73	1 Gallup 1981	2 Gallup 1978
79	82	87	83	73	75	82	73	3 Gallup 1981	2 Gallup 1978
88	90	90	83	83	83	90	83	4 NHIS 1986	3 Gallup 1981
88	90	90	83	83	83	90	83	5 NHIS 1985	3 Gallup 1981
88	90	90	83	83	83	90	83	6 NHIS 1986	3 Gallup 1981
88	90	90	83	83	83	90	83	7 NHIS 1987	3 Gallup 1981
88	90	90	83	83	83	90	83	8 NHIS 1986	3 Gallup 1981
88	90	90	83	83	83	90	83	9 NHIS 1985	3 Gallup 1981
88	90	90	83	83	83	90	83	10 NHIS 1986	3 Gallup 1981
88	90	90	83	83	83	90	83	11 NHIS 1987	3 Gallup 1981
88	90	90	83	83	83	90	83	12 NHIS 1988	3 Gallup 1981
88	90	90	83	83	83	90	83	13 NHIS 1989	3 Gallup 1981
88	90	90	83	83	83	90	83	14 NHIS 1990	3 Gallup 1981
88	90	90	83	83	83	90	83	15 NHIS 1991	3 Gallup 1981
88	90	90	83	83	83	90	83	16 NHIS 1992	3 Gallup 1981
88	90	90	83	83	83	90	83	17 NHIS 1993	3 Gallup 1981
88	90	90	83	83	83	90	83	18 NHIS 1994	3 Gallup 1981
88	90	90	83	83	83	90	83	19 NHIS 1995	3 Gallup 1981
88	90	90	83	83	83	90	83	20 NHIS 1996	3 Gallup 1981
88	90	90	83	83	83	90	83	21 NHIS 1997	3 Gallup 1981
88	90	90	83	83	83	90	83	22 NHIS 1998	3 Gallup 1981
88	90	90	83	83	83	90	83	23 NHIS 1999	3 Gallup 1981
88	90	90	83	83	83	90	83	24 NHIS 2000	3 Gallup 1981
88	90	90	83	83	83	90	83	25 NHIS 2001	3 Gallup 1981
88	90	90	83	83	83	90	83	26 NHIS 2002	3 Gallup 1981
88	90	90	83	83	83	90	83	27 NHIS 2003	3 Gallup 1981
88	90	90	83	83	83	90	83	28 NHIS 2004	3 Gallup 1981
88	90	90	83	83	83	90	83	29 NHIS 2005	3 Gallup 1981
88	90	90	83	83	83	90	83	30 NHIS 2006	3 Gallup 1981
88	90	90	83	83	83	90	83	31 NHIS 2007	3 Gallup 1981
88	90	90	83	83	83	90	83	32 NHIS 2008	3 Gallup 1981
88	90	90	83	83	83	90	83	33 NHIS 2009	3 Gallup 1981
88	90	90	83	83	83	90	83	34 NHIS 2010	3 Gallup 1981
88	90	90	83	83	83	90	83	35 NHIS 2011	3 Gallup 1981
88	90	90	83	83	83	90	83	36 NHIS 2012	3 Gallup 1981
88	90	90	83	83	83	90	83	37 NHIS 2013	3 Gallup 1981
88	90	90	83	83	83	90	83	38 NHIS 2014	3 Gallup 1981
88	90	90	83	83	83	90	83	39 NHIS 2015	3 Gallup 1981
88	90	90	83	83	83	90	83	40 NHIS 2016	3 Gallup 1981
88	90	90	83	83	83	90	83	41 NHIS 2017	3 Gallup 1981
88	90	90	83	83	83	90	83	42 NHIS 2018	3 Gallup 1981
88	90	90	83	83	83	90	83	43 NHIS 2019	3 Gallup 1981
88	90	90	83	83	83	90	83	44 NHIS 2020	3 Gallup 1981
88	90	90	83	83	83	90	83	45 NHIS 2021	3 Gallup 1981
88	90	90	83	83	83	90	83	46 NHIS 2022	3 Gallup 1981
88	90	90	83	83	83	90	83	47 NHIS 2023	3 Gallup 1981
88	90	90	83	83	83	90	83	48 NHIS 2024	3 Gallup 1981
88	90	90	83	83	83	90	83	49 NHIS 2025	3 Gallup 1981
88	90	90	83	83	83	90	83	50 NHIS 2026	3 Gallup 1981
88	90	90	83	83	83	90	83	51 NHIS 2027	3 Gallup 1981
88	90	90	83	83	83	90	83	52 NHIS 2028	3 Gallup 1981
88	90	90	83	83	83	90	83	53 NHIS 2029	3 Gallup 1981
88	90	90	83	83	83	90	83	54 NHIS 2030	3 Gallup 1981
88	90	90	83	83	83	90	83	55 NHIS 2031	3 Gallup 1981
88	90	90	83	83	83	90	83	56 NHIS 2032	3 Gallup 1981
88	90	90	83	83	83	90	83	57 NHIS 2033	3 Gallup 1981
88	90	90	83	83	83	90	83	58 NHIS 2034	3 Gallup 1981
88	90	90	83	83	83	90	83	59 NHIS 2035	3 Gallup 1981
88	90	90	83	83	83	90	83	60 NHIS 2036	3 Gallup 1981
88	90	90	83	83	83	90	83	61 NHIS 2037	3 Gallup 1981
88	90	90	83	83	83	90	83	62 NHIS 2038	3 Gallup 1981
88	90	90	83	83	83	90	83	63 NHIS 2039	3 Gallup 1981
88	90	90	83	83	83	90	83	64 NHIS 2040	3 Gallup 1981
88	90	90	83	83	83	90	83	65 NHIS 2041	3 Gallup 1981
88	90	90	83	83	83	90	83	66 NHIS 2042	3 Gallup 1981
88	90	90	83	83	83	90	83	67 NHIS 2043	3 Gallup 1981
88	90	90	83	83	83	90	83	68 NHIS 2044	3 Gallup 1981
88	90	90	83	83	83	90	83	69 NHIS 2045	3 Gallup 1981
88	90	90	83	83	83	90	83	70 NHIS 2046	3 Gallup 1981
88	90	90	83	83	83	90	83	71 NHIS 2047	3 Gallup 1981
88	90	90	83	83	83	90	83	72 NHIS 2048	3 Gallup 1981
88	90	90	83	83	83	90	83	73 NHIS 2049	3 Gallup 1981
88	90	90	83	83	83	90	83	74 NHIS 2050	3 Gallup 1981
88	90	90	83	83	83	90	83	75 NHIS 2051	3 Gallup 1981
88	90	90	83	83	83	90	83	76 NHIS 2052	3 Gallup 1981
88	90	90	83	83	83	90	83	77 NHIS 2053	3 Gallup 1981
88	90	90	83	83	83	90	83	78 NHIS 2054	3 Gallup 1981
88	90	90	83	83	83	90	83	79 NHIS 2055	3 Gallup 1981
88	90	90	83	83	83	90	83	80 NHIS 2056	3 Gallup 1981
88	90	90	83	83	83	90	83	81 NHIS 2057	3 Gallup 1981
88	90	90	83	83	83	90	83	82 NHIS 2058	3 Gallup 1981
88	90	90	83	83	83	90	83	83 NHIS 2059	3 Gallup 1981
88	90	90	83	83	83	90	83	84 NHIS 2060	3 Gallup 1981
88	90	90	83	83	83	90	83	85 NHIS 2061	3 Gallup 1981
88	90	90	83	83	83	90	83	86 NHIS 2062	3 Gallup 1981
88	90	90	83	83	83	90	83	87 NHIS 2063	3 Gallup 1981
88	90	90	83	83	83	90	83	88 NHIS 2064	3 Gallup 1981
88	90	90	83	83	83	90	83	89 NHIS 2065	3 Gallup 1981
88	90	90	83	83	83	90	83	90 NHIS 2066	3 Gallup 1981
88	90	90	83	83	83	90	83	91 NHIS 2067	3 Gallup 1981
88	90	90	83	83	83	90	83	92 NHIS 2068	3 Gallup 1981
88	90	90	83	83	83	90	83	93 NHIS 2069	3 Gallup 1981
88	90	90	83	83	83	90	83	94 NHIS 2070	3 Gallup 1981
88	90	90	83	83	83	90	83	95 NHIS 2071	3 Gallup 1981
88	90	90	83	83	83	90	83	96 NHIS 2072	3 Gallup 1981
88	90	90	83	83	83	90	83	97 NHIS 2073	3 Gallup 1981
88	90	90	83	83	83	90	83	98 NHIS 2074	3 Gallup 1981
88	90	90	83	83	83	90	83	99 NHIS 2075	3 Gallup 1981
88	90	90	83	83	83	90	83	100 NHIS 2076	3 Gallup 1981

Effects of Smoking during Pregnancy Outcome
In 1964, knowledge of the health consequences of smoking during pregnancy most-ly concerned the increased risk of low-birthweight babies (US PHS 1964). Con-siderable evidence has accumulated since that time. In the 1980 Surgeon General's report, smoking was identified as an important cause of premature births, miscarriages, and stillbirths, as well as low-birthweight babies (US DHHS 1980).

From the data available, it appears that the public has become more knowledgeable about the effects of smoking on premature births. In 1966, 34 percent of adults of all ages thought that women who smoke during pregnancy are more likely to have prema-ture babies than women who do not smoke (Table 12). Fox and coworkers (1987) present data on beliefs about the risk of smoking during pregnancy among persons 18 to 44 years of age. By 1987, 70 percent of adults aged 18 to 44 years thought that smoking during pregnancy definitely or probably increases the chances of premature birth.

Only recent data are available on public knowledge of the effects of smoking on spon-taneous abortion (miscarriage), stillbirth, and low birthweight (Table 12). In 1985, 80 percent of adults (aged 18 to 44 years) thought that smoking during pregnancy defini-tely or probably increases the risk of having a low-birthweight baby; 74 percent of adults thought that smoking definitely or probably increases the risk of miscarriage; and 66 percent of adults thought that smoking during pregnancy definitely or probably in-creases the risk of stillbirth. The 1987 NHIS showed that 89 percent of respondents believed that smoking during pregnancy "may" harm the baby. The 1966, 1985, and 1987 surveys each showed that current smokers were less likely than nonsmokers to believe that smoking increases the risk of adverse pregnancy outcomes. The Federal Trade Commission (FTC) (1981) reviewed data from a 1979 Chilton survey and a 1980 paper survey on public beliefs concerning the effects of smoking during pregnancy.

Risk of Cardiovascular Disease Among Smokers Who Use Oral Contraceptives

In 1964, the interactive effect of smoking and oral contraceptive use on the risk of CVD had not been established. The 1977/1978 Surgeon General's Report cited recent studies showing that oral contraceptive use potentiates the harmful effects of smoking on the cardiovascular system (US DHEW 1978). Since 1978, the package inserts for oral contraceptives have described this risk for users (see Chapter 7). It is now known that oral contraceptives or cigarettes, when used alone, increase the risk of heart attacks twofold; however, when used in combination, the increased risk is tenfold (US DHHS 1980). Smoking and oral contraceptive use also appear to interact synergistically to greatly increase the risk of subarachnoid hemorrhage (US DHHS 1983).

No trend data are available on the knowledge of health risks from the combined use of cigarettes and oral contraceptives. In 1985, 62 percent of adults aged 18 to 44 years believed that a woman who both takes oral contraceptives and smokes is more likely to have a stroke (Table 12). Nonsmokers were only slightly more likely than smokers to believe this (65 vs. 59 percent). Women were much more likely to believe this than were men (72 vs. 52 percent). In 1980, 64 percent of women believed that a woman who takes birth control pills further increases her risk of getting a heart attack if she also smokes.

BEST IMAGE

10

Survey	Year	Current smokers	Former smokers	Never smokers	All non-smokers	All adults
Smoking during pregnancy increases the chances of premature birth						
1. A/TS	1966	23	43	34	75	70
2. NHIS	1983 (all)	64	71	75	76	70
2. NHIS	1983 (men)					64
2. NHIS	1983 (women)					76
3. NHIS	1983 (all)	57	67	72	66	66
3. NHIS	1983 (men)					63
3. NHIS	1983 (women)					68
4. NHIS	1983 (all)	66	75	79	74	74
4. NHIS	1983 (men)					72
4. NHIS	1983 (women)					75
5. NHIS	1983 (all)	82	83	83	80	80
5. NHIS	1983 (men)					74
5. NHIS	1983 (women)					85
6. NHIS	1983 (all)	67	67	64	62	62
6. NHIS	1983 (men)					52
6. NHIS	1983 (women)					72

TABLE 12.—Continued

[illegible]

NOTE. Actual questions
The following first-question data (unpublished). Test-end percentages for all adults in 85 percent.

1. Women who smoke during pregnancy are more likely to have premature babies than women who do not smoke. (Strongly agree, mildly agree, no opinion, mildly disagree.)

2. Does a person smoking during pregnancy increase, probably increase, probably decrease the chances of premature birth?

3. of childbirth?

4. of miscarriage?

5. of low birthweight of the newborn?

6. If a woman takes birth control pills, is she more likely to have a stroke if she smokes than if she does not smoke?

7. A woman who takes birth control pills further increases her risk of getting a heart attack if she also smokes? (Know if I'm true, don't know if I'm true, think it's true, think it's not true, hard to say)

8. Smoking by a pregnant woman may harm the baby. (Strongly agree, agree, disagree, strongly disagree.)

9. Persons get sick less often who "usually" agree or "mildly" agree.

10. Percentages increase those who believe this statement as "probably" or "possibly" increases the risk.

11. Percentages include those who "know" it's true or "think" it's true.

12. Percentages include those who "normally" agree or "agree."

7 A woman who takes birth control pills (without increasing her risk of getting a heart attack) is like a smoke alarm that goes off when there is a fire. It's not true that a smoke alarm is a fire, but it's true that it's a warning that there is a fire. In the same way, a woman who takes birth control pills is not a heart attack, but it's true that it's a warning that there is a heart attack.

...the ... of ...

1. The first step is to identify the problem or question that needs to be answered. This involves understanding the context and the specific requirements of the task.

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DATE: 01-11-2011

10. *Journal of the American Medical Association*, 2000; 284: 1039-1044.

Other Health Risks Related to Tobacco Use (Passive) Smoking

In 1964, the health effects of environmental tobacco smoke (ETS) exposure were not established. Today, ETS has been identified as a cause of disease, including lung cancer, in healthy nonsmokers. In addition, compared with the children of nonsmoking parents, children of parents who smoke have an increased frequency of respiratory infections and slightly lower rates of increase in lung function as the lungs mature (US DHHS 1986a).

From the available data, it appears that the public is more likely to believe that there are health risks from ETS exposure. The percentage of adults who thought that smoking is hazardous to nonsmokers' health increased from 46 percent to 58 percent between 1974 and 1978 (Table 13). By 1986 (AUTS), 81 percent of adults thought that tobacco smoke is harmful for nonsmokers who live or work with smokers. Similarly, in 1987 (ACS 1988b), 81 percent thought that people's smoke is harmful to others nearby. The 1986 and 1987 surveys used wording corresponding to Level 2 (general acceptance) beliefs. The 1987 NHIS used wording corresponding to Level 3 (personalized acceptance) beliefs, but nevertheless obtained the same proportion (81 percent) (Table 13).

In the 1986 AUTS, former and never smokers were more likely to consider ETS to be generally harmful to health (82 and 87 percent, respectively), compared with current smokers (69 percent). Similar patterns were seen in the 1987 NHIS and 1988 Gallup survey. In the 1986 AUTS, when nonsmokers were asked whether they considered ETS to be harmful to their health, 69 percent responded that they thought so (62 percent of former smokers and 74 percent of never smokers).

Is Smoking an Addiction?

In 1964, the Surgeon General's Advisory Committee came to the following conclusion, based on the evidence available at that time: "The tobacco habit should be characterized as an addiction rather than an addiction." The Advisory Committee's Report, however, did note that tobacco use is "reinforced and perpetuated by the pharmacologic actions of nicotine on the central nervous system" (US PHS 1964). The 1979 Surgeon General's Report called smoking "the prototypical substance abuse dependency" (US DHHS 1979a). The 1988 Surgeon General's Report reaffirmed the conclusion and provided a detailed review of the evidence (US DHHS 1988).

Only limited data are available to assess public knowledge of the addictive nature of tobacco use. In a 1978 survey conducted by the Roper Organization, 59 percent of adults (57 percent of smokers) considered smoking a habit, 29 percent (22 percent of smokers) thought it an addiction, and 17 percent (15 percent of smokers) believed it to be both (Roper 1978).

In a 1986 Gallup poll of 1,046 adults 18 years and older conducted in Canada by household interview, 76.5 percent of respondents considered "cigarette smoking to be

TABLE 13.—Trends in public knowledge about the health risks of passive smoking

Survey	Year	Reference	Smoking is hazardous to nonsmokers' health (percentage who agree by smoking status)				All adults
			Current smokers	Former smokers	Never smokers	All nonsmokers	
1 Roper	1974	Roper 1978	30			57	46
2 Roper	1976	Roper 1978	38			61	52
3 Roper	1978	Roper 1978	40			69	58
4 AUTS ^a	1986	US DHHS, in press	69	82	87	85	81
5 NHIS ^b	1987		68	85	88		81
6 Gallup	1987	ACS 1988b	64	86	89		81

^aPercentages presented here are slightly lower than those previously published (CDC 1988) because the latter did not include "don't know" responses in the denominator.

^bPreliminary first quarter data (unpublished). Year-end percentage for all adults is 81 percent.

NOTE: Actual questions

1-3 Is smoking hazardous to nonsmokers' health? (probably is hazardous, probably doesn't have any real effect, don't know)

4 Think now for a moment about a nonsmoker who lives or works with smokers. Do you think that exposure to tobacco smoke is harmful to the nonsmoker's health?

5 The smoke from someone else's cigarette is harmful to you. (strongly agree, agree, disagree, strongly disagree)

6 If people smoke, do you think that it is harmful or is not harmful to people who are near them? (yes harmful, no, not harmful, can't say/no opinion)

^aPercentages include those who "strongly agree" or "agree."

like a "addiction." Of current smokers, 79.6 and 79.7 percent "yes" to the question, "Do you think you are addicted to cigarettes?" (Carnahan-Gallup 1985b).

Interaction Between Smoking and Other Exposures

The 1985 Surgeons General's Report (US DHHS 1985) reviewed evidence regarding the interaction between smoking and a variety of occupational exposures in causing disease. With respect to the interaction between smoking and asbestos, the Report concluded that these two exposures act synergistically to increase the risk of lung cancer. The risk of lung cancer in cigarette-smoking asbestos workers is more than fiftyfold the risk in nonsmokers who have not been exposed to asbestos.

Few data are available on public knowledge of these interactions. The 1980 Report survey (unpublished data, FTC) asked respondents about their belief concerning the following statement: "If you smoke and have worked with asbestos you are at least 50 times more likely to get lung cancer than if you have done neither." Seventy-four percent of respondents (and 69 percent of smokers) said that they "know it's true" or "think it's true."

Smokers' Tobacco

Smokers' tobacco (ST) use leads to increased risk of oral cancer and income addiction (US DHHS 1985c).

No data are available to assess trends in public knowledge of the health risks of ST use. In the 1986 ALTS, 78 percent of adults thought that the use of chewing tobacco is harmful in any way to a person's health. Similarly, 73 percent thought that the use of snuff is harmful to a person's health. Current smokers were less likely to know about the health effects of using chewing tobacco and snuff (71 and 66 percent, respectively) compared with former smokers (79 and 75 percent, respectively) and never smokers (81 and 76 percent, respectively).

According to the 1987 NHIS (preliminary first-quarter estimates), 82 percent of adults thought that a relationship exists between chewing tobacco use and mouth and throat cancers. Seventy-seven percent thought that snuff use is related to these cancers (unpublished data, National Cancer Institute).

Personal Health Risks for Smokers

There have been few attempts to determine smokers' beliefs regarding their own personal risk. Several Gallup surveys conducted between 1977 and 1987 asked respondents, "Do you think cigarette smoking is or is not harmful to your health?" (Table 14). Data are available for current smokers for the years 1981 and 1985. The proportion of current smokers answering in the affirmative increased from 80 percent in 1981 to 90 percent in 1985. These data, at first glance, suggest that a high percentage of smokers

TABLE 14.—Trends in public beliefs about one's personal risk from smoking

Survey	Year	Reference	Cigarette smoking is harmful to YOUR health (percentage who agree by smoking status)				All adults
			Current smokers	Former smokers	Never smokers	All nonsmokers	
1. Gallup	1977	Gallup 1983					90
2. Gallup	1978	Gallup 1978	83			95	90
3. Gallup	1981	Gallup 1983	80			96	90
4. Gallup	1983	Gallup 1985					92
5. Gallup	1985	Gallup 1985	90	96		96	94
6. Gallup	1987	ALA 1987					94
7. NHIS ^a	1987		55				

^aPreliminary first-quarter data (unpublished). Year-end percentage is 55 percent.

NOTE. Actual questions:

1-4. Do you think cigarette smoking is or is not harmful to your health?

7. Do you believe your smoking has affected your health in any way?

...ceive a personalized risk from smoking. However, respondents were asked to respond to the question, "Do you believe your smoking has affected your health in any way?" The principal reason this percentage is substantially lower than that obtained by the 1985 Gallup survey (90 percent) is probably that the former was likely to be understood as referring to overt symptoms or disease, while the latter was likely to be understood as referring to the risk of harm.

Another approach to measure perceptions of personalized risk has been to ask smokers whether they are "concerned" about the effects of smoking on their health. It appears that smokers are more likely today to be concerned that smoking is harmful to their own health. In 1964, 50 percent of current smokers were concerned about the possible effects of smoking on their own health (Table 15); this proportion increased to 73 percent by 1986. However, in 1986, only 18 percent of smokers were very concerned about the effects of smoking on their health; 56 percent of smokers were only fairly or slightly concerned; and 24 percent were not at all concerned.

From 1970-86, the percentage of smokers who were very concerned about the possible effects of smoking on their health decreased from 29 to 18 percent, while the percentage who were only slightly concerned increased from 19 to 34 percent. This redistribution within the population of smokers having any concern may have occurred because a much greater proportion of those who were very concerned may have quit smoking during this period; therefore, they would not have been included in subsequent surveys.

A third approach to assess personalized risk, or more correctly, the absence of personalized risk, is to ask smokers if they believe themselves to be at lower risk than other smokers. In 1986, 21 percent of adults thought that the cigarettes they smoked were less hazardous than other cigarettes (Table 3).

Other data pertaining to perceptions of personalized risk from ETS and from smoking among adolescents appear in the sections on Involuntary Smoking (above) and Adolescent Knowledge (below).

How Harmful Is Smoking?

The data presented above reveal that a vast majority of adults agree that smoking is hazardous to health and correctly recognize the conditions that are associated with smoking. However, these data do not address the depth of the public's understanding regarding the absolute risk of smoking, the relative risks of smoking, the population-attributable risk of smoking, and the risk of smoking in comparison with other risks. A more in-depth understanding of the risks of smoking may be much more important in promoting behavioral change than the more superficial beliefs measured by the data presented above. Unfortunately, only limited data are available to address the public's understanding of the risks of smoking.

TABLE 15.—Trends in smokers' concern about the effects of smoking on their own health

Survey	Year	Very concerned	Fairly concerned	Only slightly concerned	Not concerned	Any concern
1 AUTS	1964	13	18	19	50	50
2 AUTS	1966	13	17	18	52	47
3 AUTS	1970	29	22	19	31	69
4 AUTS	1975	25	23	19	33	68
5 AUTS	1986	18	22	34	24	75

NOTE: Actual questions
1-5. Are you at any way concerned about the possible effects of cigarette smoking on your health?

SOURCE: US CHSW (1964, 1973, 1976), US CHHS, in press.

A. Attributable Risk

Absolute risks can be determined by the proportion of those exposed to a given risk factor who will actually die or develop the particular condition, or by the reduction in life expectancy caused by exposure. As many as one-third of heavy smokers aged 35 years will die before age 85 of diseases caused by their smoking (Mattsou, Pollack, Callen 1987), and 30-year-old smokers will shorten their lives an average of 6 to 8 years if they smoke a pack a day (US DHEW 1979a).

From 1970-78, the proportion of adults who believed that smoking a pack of cigarettes a day made a great deal of difference in longevity increased slightly from 42 to 50 percent (FTC 1981). However, most adults underestimate the impact of smoking on longevity, according to a 1980 Roper survey. In that survey, 30 percent of the population and 41 percent of smokers did not know that a pack of 30 cigarettes a day shortened his life expectancy *at all* by smoking (FTC 1981). Among those who did know that smoking reduces one's life expectancy, many underestimated the degree to which this is true. On average, nonsmokers underestimated the loss in life expectancy by about 2 years and smokers underestimated it by more than 4 years.

Relative Risk

Relative risk describes the risk of dying or developing disease for a person exposed to a particular risk factor compared with someone not exposed. For example, male smokers are 22 times more likely and female smokers are 12 times more likely to develop lung cancer compared with nonsmokers of the same sex (Chapter 3).

In the 1980 Roper study, respondents were asked if smokers were specifically 10 times more likely to die from lung cancer (the estimated relative risk derived from the data available at that time); 23 percent of the general population and 39 percent of smokers did not believe this statement. Some of this lack of belief may be due to the use of a specific figure. However, using more general terms, 16 percent of adults and 25 percent of smokers did not think that smokers were "many times" more likely than nonsmokers to develop lung cancer (FTC 1981).

Attributable Risk and Smoking-Attributable Mortality

Attributable risk refers to that proportion of a disease that can be "attributed" to (or is caused by) a particular risk factor, such as smoking. For example, smoking accounts for about 80 to 90 percent of lung cancer deaths and 80 to 85 percent of deaths from COPD (Chapter 3).

Much of the information regarding the public's understanding of the magnitude of the risks of smoking comes from the Roper survey conducted in 1980. In this survey, 43 percent of adults and 49 percent of smokers did not know that smoking causes most of the cases of lung cancer and 22 percent of adults and 27 percent of smokers did not know that smoking even causes many cases of lung cancer (FTC 1981). In the 1987 NHIS (unpublished data, National Cancer Institute), 28 percent (preliminary first-quarter estimate) of smokers and 16 percent (year-end figure) of the general population

agreed with the statement, "Most deaths from lung cancer are caused by cigarette smoking."

Attributable risk figures can be used to calculate smoking-attributable mortality. The 1979 Surgeon General's Report (US DHEW 1979a, p. ii) attributed approximately 350,000 deaths each year to cigarette smoking. In 1985, an estimated 390,000 deaths in the United States were attributable to smoking (Chapter 3). In the 1979 Chilton survey, adults aged 29 to 31 years were asked: "In the United States, two million people die each year. About how many of these deaths are probably related to cigarette smoking?" The responses offered by the interviewer, along with the percentages chosen, were: 10,000 deaths, 22 percent; 50,000, 16 percent; 100,000, 16 percent; 300,000, 17 percent; don't know, 31 percent (Chilton, 1980).

Comparative risk of

The risk of dying from smoking can be compared with the risk of dying from other behavioral risk factors, such as living under stress, eating high-cholesterol foods, or drinking heavily. The public's perception of these comparative risks was assessed by Roper surveys from 1970-78 (Table 16). In 1970, living under a lot of tension and stress and not getting regular exercise were considered by more adults to make a great deal of difference in longevity than was smoking a pack of cigarettes daily. In contrast, fewer adults considered regularly eating food high in cholesterol, consuming three or four drinks of liquor a day, or being 20 lb overweight to have an effect on longevity. In 1978, only stress was considered by more adults to make a great deal of difference in longevity.

In 1983, Louis Harris and Associates conducted a national telephone survey of 1,254 randomly selected adults for *Prevention* magazine (Harris 1983). Respondents were asked to rank 24 health and safety factors on a 1-to-10 (low-to-high) scale of importance. A sample of 103 health experts (medical school chairmen of preventive medicine, public health school deans, government officials, journal editors, and others) was also interviewed and was asked to make the same rankings. All of the public's mean rankings were in the top half of the scale; thus, none of the factors were seen as trivial in importance. "Not smoking" was ranked near the middle, below "keeping water quality acceptable," "having smoke detectors in the home," "taking steps to control stress," and "getting enough vitamins and minerals" (Figure 1). In contrast, the panel of experts ranked "not smoking" at the top of the list (Figure 2).

The 1986 AUTS asked five questions comparing the perceived risk of cigarette smoking with the perceived risk of drinking alcoholic beverages, smoking marijuana, being exposed to air pollution, driving without a seat belt, and being 20 lb overweight (Table 17). In each of the comparisons, never smokers were more likely to disagree than to agree that cigarette smoking is less harmful than the other risks. Only in the case of marijuana smoking are the percentages of those agreeing and disagreeing similar. On the other hand, current smokers were more likely to agree than to disagree that cigarette smoking is less dangerous than marijuana smoking and air pollution.

Dolecek and coworkers (1986) surveyed 973 adults in Chicago from a sample of family members of students who participated in AHA's Chicago Heart Health Car-

TABLE 16.—Trends in public knowledge about the health risks of smoking compared to other risks, 1970-78

Question	It makes a great deal of difference in longevity if a person . (percentage who agree by year)				
	1970	1972	1974	1976	1978
lives under a lot of tension and stress	69	72	74	76	74
doesn't get regular exercise	49	38	38	33	34
smokes a pack of cigarettes a day	42	42	44	45	50
regularly eats a lot of food with high cholesterol	31	34	38	39	43
drinks 3 or 4 highballs a day	29	34	35	37	39
is 20 pounds overweight	23	26	25	24	24

SOURCE: Rippe (1978)

Q.: In helping people in general to live a long and healthy life, how would you rate the importance of . . .

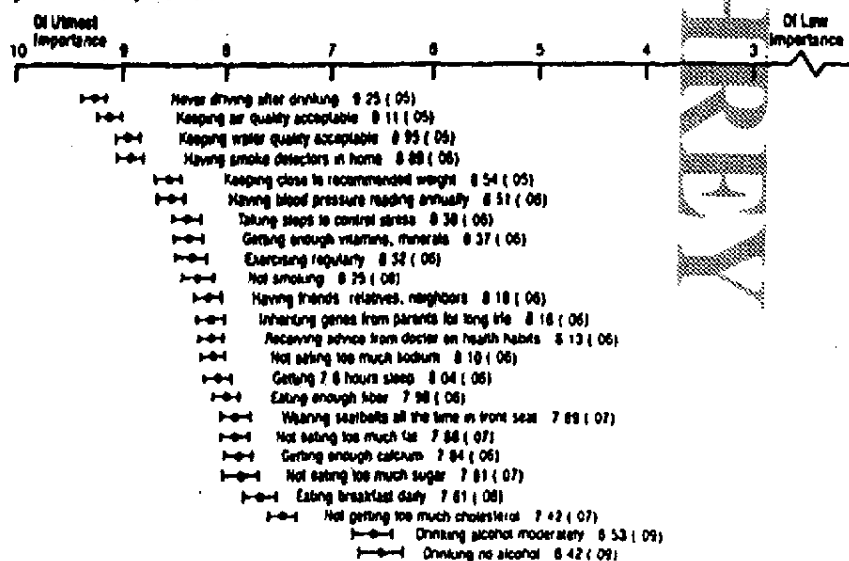


FIGURE 1.—Adult public's rating of 24 health and safety factors

NOTE: Shown above is the mean importance rating for each factor given by 1,234 adults using a 1 to 10 scale. Given in parentheses is the standard error of the mean. The 95 percent confidence interval around each mean is graphically displayed as a band or range consisting of ± 1.96 standard error values.

SOURCE: Harris (1983)

Q.: Thinking about the overall health of the general population, how important is it for adults to . . .

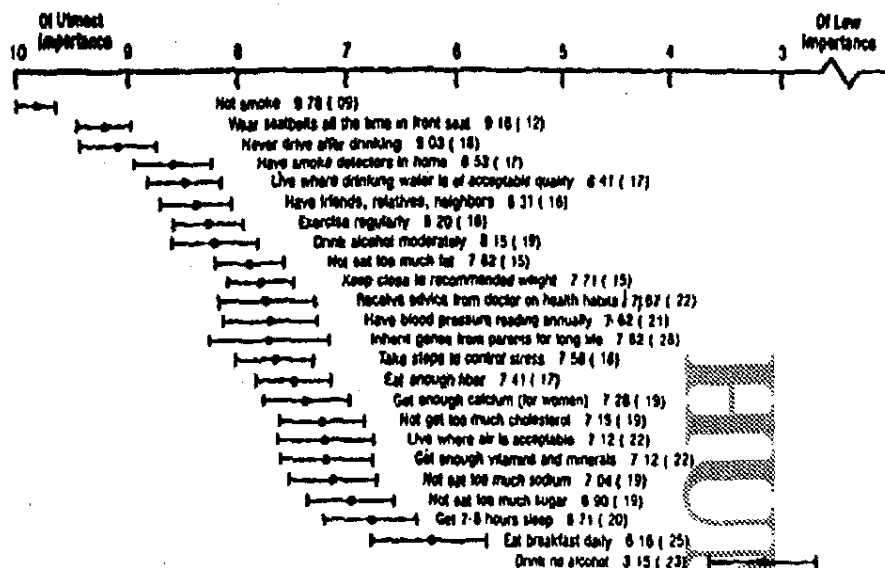


FIGURE 2.—Experts' rating of 24 health and safety factors

NOTE: Shown above is the mean importance rating for each factor given by 103 experts using a 1 to 10 scale. Standard error in parentheses is the standard error of the mean. An indicator of the variability of individual ratings around each mean is graphically displayed as a band or range consisting of 2 two standard error values.

SOURCE: Harris (1993).

TABLE 17.—Public knowledge about the harmfulness of cigarette smoking compared with other risks, 1986

	Percentage who agree			Percentage who disagree		
	Current smokers	Former smokers	Never smokers	Current smokers	Former smokers	Never smokers
Moderate use of cigarettes is less harmful to health than moderate use of alcoholic beverages	32	21	20	64	63	63
Smoking cigarettes is less harmful to health than smoking marijuana	48	38	37	53	34	40
Air pollution is a greater health risk than cigarettes	48	30	28	51	54	53
Smoking cigarettes is less dangerous than driving without a seat belt	36	25	26	52	58	68
Smoking is less harmful than being 20 pounds overweight	31	19	18	59	69	71

NOTE: Percentages of those who agree include those who "strongly agree" or "somewhat agree." Percentages of those who disagree include those who "strongly disagree" or "somewhat disagree."

SOURCE: AUST 1986 (US DHHS in press).

recruited. Program during the 1980-81 school year. Respondents were asked to select the three major risk factors for CVD from a list of nine. The percentage responses for these risk factors were: high blood pressure, 45 percent; overweight, 22 percent; stress/tension/worry, 14 percent; cigarette smoking, 13 percent; heredity/family history, 7 percent; eating too much cholesterol (fat), 7 percent; not enough rest/working too hard, 6 percent; not enough exercise, 4 percent; and diabetes, 2 percent.

From 1982-86, Becker and Levine (1987) surveyed 90 adults with no known CHD who were siblings of patients hospitalized for recently documented CHD. Patients and siblings were all less than 60 years old. The siblings were randomized into an assessment group (interviewed within 2 weeks of the index patients' discharge and again 4 months later) and a control group (received only one interview at 4-month followup). Participants were asked in an open-ended question to name factors thought to cause or be associated with CHD. Smoking was identified by 83 percent of the control group (after stress, 91 percent) and was the risk factor most often cited by the assessment group (97 percent).

Folsom and others (1988) conducted two surveys in the metropolitan Minneapolis/St. Paul area during 1985-86. One survey sampled blacks aged 35 to 74 years, while the other sampled a primarily white population. Subjects were asked the open-ended question, "What do you think are the most important causes of cardiovascular diseases (heart attack or stroke)?" The percentage of blacks (total sample size=1,252) who identified smoking as one of the most important causes of CVD was 32 percent; stress/worry (54 percent) and improper diet (45 percent) ranked higher. Among whites (total sample size=1,870), smoking and improper diet were both ranked highest (54 percent).

In a survey conducted in 1987 by the Gallup Organization for ACS, 90 percent of adults reported that smoking cigarettes contributes to a higher risk of cancer. Lower percentages reported that a higher cancer risk is associated with sunburn and sunburn (73 percent), alcohol (34 percent), high-fat diet (33 percent), and smoked and nitrite-cured meats (31 percent) (ACS 1988b).

For the studies reviewed above on comparative risk, data stratified by smoking status were available only from the 1986 AUTS.

Knowledge Among Adolescents About the Health Risks of Smoking

Because most regular cigarette smokers begin to smoke before age 21 (Chapter 5), it is important to consider teenagers' knowledge about the health effects of smoking. This knowledge can be addressed in the following categories: (1) general health effects of smoking, (2) personalized risk of smoking-related diseases, (3) risks of smoking compared with other health risks, (4) beliefs about addiction, and (5) health effects of ST use.

General Health Effects

Since 1975, beliefs among adolescents that cigarette smoking is harmful have increased. National data on knowledge of high school seniors about the health risks of smoking are available from the Monitoring the Future Project (sponsored by the Na-

TABLE 18.—Knowledge about the health risks of smoking among high school seniors, 1975-86, Monitoring the Future Project

Survey year	Don't know	No risk	Sligh risk	Modest risk	Great risk	Any risk
1975	2	3	9	35	51	91
1976	2	2	9	31	56	92
1977	2	2	9	29	58	92
1978	2	2	8	30	59	92
1979	1	2	7	27	63	91
1980	1	1	7	27	64	91
1981	1	1	6	28	63	90
1982	2	2	7	30	61	91
1983	1	2	7	29	61	91
1984	1	2	6	27	64	91
1985	2	2	6	24	67	91
1986	1	1	5	26	68	91

How much do you think people risk harming themselves (physically or in other ways), if they smoke one or more packs of cigarettes per day? (percentage responding in each category)

Source: Beckman, Johnson, O'Malley (1980b); Johnson and Beckman (1980); Johnson, Beckman, O'Malley (1980a, b, 1982, 1984, 1986)

TABLE 19.—Perceived harmful effects of drugs among high school seniors (9th;
Monitoring the Future Project; National Institute on Drug Abuse)

How much do you think people not harming themselves (physically or in other ways), if they (percentage of people responding)	Great risk
try one or two drinks of an alcoholic beverage (beer, wine, liquor)?	5
try marijuana (pot, grass) once or twice?	15
take one or two drinks nearly every day?	25
smoke marijuana occasionally?	25
try amphetamines (uppers, pop pills, bennies, speed) once or twice?	25
try barbiturates (downers, goofballs, reds, yellows, etc.) once or twice?	26
use amphetamine substances regularly (climbing subjects, plug, dipping subjects, snuff)?	26
try cocaine once or twice?	34
have five or more drinks once or twice each weekend?	39
try LSD once or twice?	42
try heroin (smack, horse) once or twice?	46
take cocaine occasionally	54
smoke one or more packs of cigarettes per day?	66
take amphetamines regularly?	67
take barbiturates regularly?	67
take four or five drinks nearly every day?	67
take heroin occasionally?	68
smoke marijuana regularly?	71
take cocaine regularly?	82
take LSD regularly?	83
take heroin regularly?	87

NOTE: Possible responses included great risk, moderate risk, slight risk, no risk, don't know.
SOURCE: Bachman, Johnston, O'Malley (1987)

tional Institute on Drug Abuse) for every year since 1975. Although nearly all teenagers recognize some risk of harm from smoking, the proportion who think that smoking a pack or more a day causes great risk of harm increased from 51 percent in 1975 to 67 percent by 1985 (Table 19).

A 1975 survey (US DHEW 1975a) of teenagers who smoked revealed that many thought that the dangers of smoking were exaggerated for their age group (52 percent of girls; 54 percent of boys); that there was too much talk about things that were bad for them (43 percent of girls; 48 percent of boys); and that air pollution was just as important a cause of lung cancer as cigarettes (67 percent of girls; 51 percent of boys). In 1985, only 16 percent of high school seniors agreed with the statement, "The harmful

effects of cigarettes have been exaggerated" (see Table 24, Bachman, Johnston, O'Malley 1987) (data stratified by smoking status were not published).

Personalized Risk

A survey of 895 students in grades 2 through 12 in 134 public schools in Milwaukee, WI, during the 1979-80 academic year, Leventhal, Glynn, and Fleming (1987) assessed the degree to which the students personalized the health risk from smoking. When asked, "Do you think that smoking can injure or hurt the body?" 98 percent answered affirmatively and were able to accurately name one or more body parts that are directly affected by smoking. A subsample of 622 subjects (smokers and non-smokers) was asked whether they "would be less likely, about as likely, or more likely to get sick from smoking than other people." Those answering "less likely" accounted for 47 percent of the smokers but only 36 percent of the nonsmokers. 47 percent of those who intended to become adult smokers versus 36 percent of those who did not intend to become adult smokers, and 41 percent of those from smoking families versus 23 percent of those from nonsmoking families. These findings suggest that although children and adolescents recognize smoking as harmful, they may not personalize the risk. This failure to personalize the perception of risk may play a role in the initiation of smoking.

Some teenagers may minimize or deny their personal risk because of a belief that certain smoking patterns are safe. In the 1974 and 1979 Teenage Smoking Surveys conducted by the Department of Health, Education, and Welfare (US DHEW 1976a, 1979b), about one-quarter of teenagers agreed with the statement, "There's nothing wrong with smoking cigarettes if you don't smoke too many." About one-third agreed with the statement, "Cigarette smoking is harmful only if a person inhales."

Comparative Risk

In the 1979 Chilton Survey (Chilton 1980), teenagers were asked which of the following caused the most deaths during the past year: traffic accidents, fires, cigarette smoking, or drug overdose. Traffic accidents were cited by 44 percent of teenagers, followed by drug overdose (21 percent), cigarette smoking (19 percent), and fires (6 percent).

The High School Seniors Survey includes questions about the risks associated with using a variety of licit and illicit drugs at different levels of intake. In 1985, 66 percent of high school seniors thought that smoking one or more packs of cigarettes per day causes great risk of harming oneself. More students saw great risk in the regular use of marijuana, cocaine, LSD, and heroin (Table 19). In contrast, more teenagers saw great risk in regular smoking compared with trying amphetamines, barbiturates, cocaine, or LSD; in trying or using occasionally marijuana or cocaine; or in trying alcohol, having one to two drinks per day, or having five or more drinks one or two times per week.

The *Worlthy Reader* magazine includes a survey twice a year in the periodical, which is distributed throughout the country to more than 10 million children in grades 2

through 9. Surveys are filled out in class by students under a teacher's supervision. The topics addressed are related so that the same survey is repeated every year. The Spring 1986 survey covered safety and health (Weekly Reader 1986). Of an estimated 400,000 student responses for grades 2 through 6, 128,000 were randomly chosen for analysis. Although the respondents do not represent a randomly selected sample, results pertaining to tobacco are presented here because of the large sample size and the paucity of data available for young children.

The survey included the following question: "Many people say the following things are harmful for kids to do. How harmful do you think each is for kids your age? (very harmful, somewhat harmful, not harmful) ... overeating, eating junk food, listening to very loud music, smoking, chewing tobacco, staying up late, failing to get enough exercise." Grade-specific results for students in grades 4 through 6 showed that smoking (90 to 95 percent) and chewing tobacco (80 to 95 percent) were much more likely to be perceived as "very harmful" compared with the other choices, all of which were considered to be "very harmful" by less than 40 percent of respondents (except for low music, among fourth graders—70 percent). However, these results should be interpreted with caution because of the possibility of sampling bias and the leading nature of the question.

Addiction

Of particular concern are teenagers who are unaware of the addictive nature of cigarette smoking, and who, therefore, may be tempted to "experiment" with smoking. In the 1974 and 1979 DHEW Teenage Smoking Surveys (US DHEW 1976a, 1979b), about one-quarter of the teenagers agreed with the statement, "Teenagers who smoke regularly can quit for good any time they like." About 60 percent agreed that "It's okay for teenagers to experiment with cigarettes if they quit before it becomes a habit." In the 1979 survey, teenagers were asked, "What would you say is the possibility that 5 years from now you will be a cigarette smoker?" Fifty percent of the current regular smokers (48 percent of boys and 52 percent of girls) answered "definitely not" or "probably not." These findings suggest that a large proportion of new smokers are unaware of or underestimate the addictive nature of smoking.

In 1975, 56 percent of girls aged 13 to 17 years and 62 percent of young women aged 18 to 35 years thought that smoking was as addictive as illegal drugs (US DHEW 1975a).

In the study by Leventhal, Glynn, and Fleming (1987) of 895 students in grades 2 through 12 in Milwaukee, WI, subjects were asked how hard it is for heavy smokers and for light smokers to quit smoking, and how heavy and light smokers feel when they quit. Answers were used to construct a "knowledge of addiction" scale. The investigators found that young people who smoke or who have smoking family members have lower "knowledge of addiction" scores. The authors speculate that these individuals may be "defending against the thought that either they or a parent has an uncontrollable problem."

Information on teenage beliefs concerning the addictiveness of ST use is discussed below.

REPORT

Smoking Tobacco Use

In 1985, the Office of the Inspector General, Department of Health and Human Services, surveyed a nonrandom sample of 399 students in 11 junior high or middle schools and 20 high schools in 16 States regarding ST use (US DHHS 1986d). ST users were resampled based on identification of users and nonusers by school officials. The sample was composed of 290 current ST users (73 percent) and 109 nonusers (27 percent). Eighty percent of junior high school users and 92 percent of high school users acknowledged that dipping snuff and chewing tobacco can be harmful to a person's health (Table 20). When asked about the extent of physical harm that may result from ST use, however, about half of users believed that there is no risk or only slight risk from regular use. One-third of junior high school users and only 5 percent of high school users thought that ST use may lead to mouth cancer. There was poor understanding of the effects of ST use on gum and dental conditions. One-quarter of junior high school users believed that regular ST use is not addictive, and more than one-third did not know that snuff contains nicotine. In summary, these findings suggest that users are substantially uninformed about the health effects and addictiveness of smokeless tobacco use. However, the degree to which these results can be generalized nationally is limited by the nonrepresentative nature of the sample.

Data from the Monitoring the Future Project showed that in 1986, a total of 99 percent of high school seniors believed that regular ST use poses a great (26 percent) or moderate (33 percent) risk of harm, compared with 36 percent who believed that ST use poses slight (28 percent) or no (8 percent) risk (Bachman, Johnston, O'Malley 1987).

Constituents of Tobacco Smoke

The estimated number of known compounds in tobacco smoke exceeds 4,000, including some that are pharmacologically active, toxic, mutagenic, carcinogenic, and antigenic (Chapter 2). One of these is carbon monoxide, whose presence in cigarette smoke is cited in one of the four health warnings rotated on cigarette packages and advertisements since 1985 (Chapter 7).

In a 1979 survey conducted by Chilton Research Services for the Federal Trade Commission (FTC 1981), respondents were asked, "Does cigarette smoke contain carbon monoxide?" Fifty-one percent of teenagers (aged 13–18) either did not know (21 percent) or said "no" (29 percent); 45 percent of adults (aged 29–31) either did not know (26 percent) or said "no" (19 percent).

In a 1980 Roper survey (FTC 1981), 53 percent of all respondents and 56 percent of smokers did not know or believe that "Cigarette smoke contains carbon monoxide, which is a dangerous gas."

In the 1986 AUST, 62 percent of current smokers answered "yes" to the question, "As far as you know, does cigarette smoke contain carbon monoxide?" Thirteen percent said "no," and 25 percent did not know. Former and never smokers were not asked this question.

The overall mortality rates of former smokers (compared with never smokers) declines with increasing years of abstinence. According to data reviewed in the 1979 Surgeon General's Report (US DHEW 1979a) from the U.S. Veterans Study and the British Doctors Study, overall mortality rates of former smokers are similar to those of never smokers 15 years after quitting (US DHEW 1979a). With respect to lung cancer mortality, the increased risk diminishes substantially by 5 to 9 years after quitting, but remains above the risk of never smokers for many more years except for those with fewer than 30 years of cigarette smoking (Chapter 2). A reduction in CHD mortality occurs within the first few years after cessation (US DHHS 1983). The risk of COPD mortality decreases eventually after smoking cessation but does not decline to equal that of never smokers even after 20 years of cessation (US DHHS 1984).

In the 1984 NHIS, respondents were asked how long it takes before former smokers' chances of developing a disease return to normal. Slightly more than half believed that the risks return to normal within 5 years (Table 21). Results were similar when stratified by smoking status.

The 1987 NHIS included questions regarding the health benefits of quitting in terms of specific disease risks. These data were not available for inclusion in this Report.

Discussion

It has been 25 years since the release of the first Surgeon General's Report on smoking and health. During that time, a major public health effort has been made to educate the public regarding the health consequences of smoking (see Chapters 6-8).

Public knowledge of the health risks of smoking has improved as a result of this massive public health education campaign. The belief that smoking is harmful to health has increased since 1964. In 1964, a majority of adults acknowledged the general health risk of smoking and believed that smoking is a major cause of lung cancer, but a minority believed that smoking increases the risk of COPD, heart disease, and premature birth. By the mid-1980s, a substantial majority of adults (including nonsmokers and smokers) recognized the general health risks of smoking and believed that smoking increases the risk of lung cancer, COPD, and heart disease, and prematurely, low birthweight, miscarriage, and stillbirths.

Knowledge of the risks of exposure to ETS has also increased markedly since 1974. In fact, this high level of belief preceded the release of the 1986 Surgeon General's Report on the health consequences of involuntary smoking.

Current Gaps in Public Beliefs About the Health Effects of Smoking

Despite the growing level of public knowledge noted above, a substantial number of Americans are still uninformed about or do not believe the health risks of smoking. These gaps in knowledge or beliefs are more evident when one considers the proportion of adults who do not acknowledge certain health risks rather than the proportion who do. For example, among smokers—for whom this information is particularly

TABLE 20.—Beliefs about the health effects of smokers tobacco (ST) use among 399 junior and senior high school students (percentage who agree) in 16 States, 1986

	Users		Nonusers (N = 109)
	Junior high school (N = 76)	High school (N = 214)	
ST use can be harmful	80	92	97
Risk from ST use:			
None or slight	57	42	32
Moderate to great	43	58	68
Regular ST use may lead to mouth cancer	33	5	5
Gum and mouth problems among users are very rare	64	41	33
ST use increases risk of tooth stains, wear, and loss	24	11	16
Snuff does not contain nicotine	38	20	32
Regular ST use is not addictive	25	15	10
ST use is much more safe than cigarettes	81	81	59

NOTE: ST use defined as follows: has dipped or chewed more than 100 times, currently uses daily or at least 3 days per week, dipping at least three times on days of use. *Nonuser defined as follows: has never dipped or chewed, or has only used at a few times or more than a few times but fewer than 100 times.*

SOURCE: US DHHS (1986a)

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TABLE 21.—Public knowledge about the health benefits of smoking cessation in relation to years of abstinence, 1986

	If someone gives up smoking completely, how long do you think it will take before their chances of developing a disease return to normal? (percentage indicating the following number of years)						
	<1	1-2	3-5	6-10	11-15	15	Never
Current smokers	17	23	16	8	1	1	7
Former smokers	14	23	20	8	1	1	7
Never smokers	16	23	16	6	1	1	12

SOURCE: AUST 1986 (US DHHS, in press)

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men—A 1967 survey (1965) did not believe that smoking is harmful to health. In 1966, 16 percent did not think that a person who smokes is more likely than a person who does not smoke to get lung cancer. Similar proportions of smokers did not believe that smokers are more likely to get heart disease (29 percent), chronic bronchitis (27 percent), emphysema (15 percent), and laryngeal cancer (18 percent). These percentages correspond to 8 million to 15 million adult smokers in the United States.

Another gap exists in the public's understanding of the special health risks of women who smoke. Compared with 1964, in 1985 smokers were more than twice as likely to recognize smoking as a cause of premature delivery. However, in 1985, 24 percent of all women smokers and nonsmokers combined) 18 to 44 years of age did not recognize the risk of prematurity; 15 percent did not recognize the risk of low birthweight; 25 percent did not recognize the risk of miscarriage; and 32 percent did not recognize the risk of stillbirth (Table 12; Fox et al. 1987).

The fact that in 1985 10 percent of smokers did not indicate that smoking is harmful to health (Table 2), despite all efforts designed to impart such information (Chapman 6-8), suggests that this group of smokers may resist accepting any information on the health effects of smoking. This finding has important implications for smoking control efforts and for setting public health objectives. It implies that other techniques besides providing information (e.g., policy incentives—see Chapter 7) are necessary to persuade some smokers to quit. It also suggests that it is unrealistic to set a goal above 90 percent of smokers for public knowledge about any health effect of smoking.

Another gap in public knowledge involves teenagers. Youth may understand that smoking is generally harmful to health, but many may not appreciate the adverse nature of smoking or may deny a personal susceptibility (Lewit et al. 1987). In addition, data from one study (US DHHS 1986c) suggest that many ST users are not aware of the health effects and addictiveness of the product.

Fishbein (1977) described three different ways in which individuals may be informed of a given piece of information: (1) they may become aware that the information exists; (2) they may accept the information in general; or (3) they may accept the information at a personalized level. These three ways of being informed correspond to three levels of belief mentioned at the beginning of this Chapter: Level 1 (awareness), Level 2 (general acceptance), and Level 3 (personalized acceptance).

Persons may have knowledge or beliefs at one level, but not at another. For example, some smokers may be aware of the Surgeon General's Reports and accept the general fact that smoking is dangerous, but do not believe that they will be harmed by smoking. The data presented in this Report support this concept. Whereas in 1975 approximately 90 percent of smokers believed that smoking is harmful to health (Table 2), in 1986 only 75 percent were concerned about the effects of smoking on their health (Table 15). The recognition of a general risk but disbelief in a personal risk may result from several factors, including a belief that using low-tar cigarettes (see Table 3), smoking fewer cigarettes daily (see Table 5), or having certain genetic factors eliminates the personal risk.

In order to make a fully informed decision, a person should have complete and accurate Level 3 beliefs about the outcomes of each alternative action (Fishbein 1977). The personalization (perception of the personal relevance) of abstract information has

been shown to be an important aspect of behavior change in general (Mishory, 1974) and of health-related behavior change in particular (Ben-Sira, 1982; Schiele and Gulchins 1984).

Factors Interfering With Changes in Knowledge

There is a vast body of literature pertaining to the acquisition of knowledge and the process of learning. Research in this area has identified many factors that enhance or interfere with this acquisition. The brief discussion below does not attempt to provide a comprehensive review of this literature, but rather attempts to identify a few of the more salient factors that may impede the development of accurate beliefs about the health risks of smoking. The importance of beliefs in determining junking behavior is discussed in Part II of Chapter 5 (sections on Cognition and Decision-making).

Informing the public about the health risks of smoking is difficult to accomplish. Risk assessment is a complex discipline, not fully understood by its practitioners, much less the lay public (Slovic 1986). Risk judgments are influenced by the memorability of past events; as a result, any factor that makes a risk memorable—such as a recent disaster or heavy media coverage—seriously distorts the perception of risk. Risks from dramatic and sensational causes of death, such as injuries, homicides, and natural disasters, tend to be greatly overestimated. Risks from undramatic causes, such as bronchitis, emphysema, or cancer, which take one life at a time and which may be more common in nonfatal form, tend to be underestimated (Slovic 1986). News media coverage of health risks has been found to be biased in the same direction, thus contributing to the difficulties of obtaining proper perspective on risks (Slovic 1986).

The fact that perceptions of risk are often inaccurate may indicate the need for warnings and educational programs. Such programs, however, face the obstacle that information based on probability is likely to have less impact on recipients than information based on certainty. For example, the data presented herein indicate that the majority of smokers believe that smoking increases the chance of getting lung cancer. However, not all smokers develop lung cancer, and on occasion, a well-publicized case of lung cancer occurs in an individual who never smoked. These "exceptions" may provide smokers with a rationale to continue smoking despite their abstract belief of risk.

In addition to their difficulty with understanding risks, smokers may deny personal risk with respect to health effects of smoking and addiction. Some smokers incorrectly believe that while smoking may be hazardous to others, it is not hazardous to themselves because of the particular type of cigarette they smoke, the amount they smoke, or their family history of disease. Persons who are exposed to a health risk, such as smokers, may attempt to reduce the anxiety generated in the face of that risk by denying the existence or magnitude of the risk, thus making the risk seem so small that it can be safely ignored (Slovic 1986).

Teenagers pose a special challenge for sharing knowledge of the health risks of smoking. As mentioned above and as shown in Table 18, the majority of high school seniors do believe that smoking is generally harmful. However, the fact that the health risks are in the distant future for teenage smokers may make it difficult for them to fully appreciate those risks. In other words, this lag may reduce teenagers' likelihood to

transform Level 2 beliefs to Level 3 beliefs. This is one reason smoking prevention efforts now tend to emphasize social influence approaches and to deemphasize communication of the long-term health risks of smoking (Chapter 6).

Although empirical evidence is sparse, tobacco industry activities in the form of advertising and promotion, public relations, and lobbying may interfere with public beliefs and personalized acceptance of the health risks of smoking. Because most individuals may not understand how smoking causes the diseases with which it is associated, many persons may be vulnerable to information that attempts to cast doubt on such relationships. These industry activities are reviewed in Chapters 6 and 7.

The 1990 Health Objectives for the Nation

In 1990, the U.S. Public Health Service established the 1990 Health Objectives for the Nation (US DHHS 1990). A middecade review of progress toward meeting these objectives was published in 1986 (US DHHS 1986). These objectives included five goals for public knowledge of the health consequences of smoking:

Objective 1: By 1990, the share of the adult population aware that smoking is one of the major risk factors for heart disease should be increased to at least 85 percent.

Objective 2: By 1990, at least 90 percent of the adult population should be aware that smoking is a major cause of lung cancer, as well as multiple other cancers including laryngeal, esophageal, bladder, and other types.

Objective 3: By 1990, at least 85 percent of the adult population should be aware of the special risk of developing and worsening chronic obstructive lung disease, including bronchitis and emphysema, among smokers.

Objective 4: By 1990, at least 65 percent of women should be aware of the special health risks for women who smoke, including the effect on outcomes of pregnancy and the excess risk of CVD with oral contraceptive use.

Objective 5: By 1990, at least 65 percent of 12-year-olds should be able to identify smoking cigarettes with increased risks of serious disease of the heart and lungs.

For the purposes of these objectives, the term aware was not defined and no distinction was made between Level 1, Level 2, and Level 3 beliefs (see above).

Progress toward meeting the first two objectives cannot be assessed reliably because they refer to smoking as "one of the major risk factors" for heart disease and "a major cause" of lung cancer and other cancers. On the other hand, most surveys have assessed public beliefs about whether smoking increases the risk of or "is related to" heart disease or lung cancer (Tables 8 and 9). As mentioned above, such wording changes can markedly affect results of surveys assessing public beliefs.

The third objective appears to have been met in the case of emphysema and nearly met in the case of chronic bronchitis (Table 10). In 1985, the percentages of adults 18 to 44 years of age who acknowledged the various effects of maternal smoking on the fetus were generally 10 to 20 percentage points below the goals listed in the fourth objective, except that 85 percent of women believed that smoking during pregnancy in-

creates the risk of having a low on-the-job death rate (Table 22). The point is that we know of the interactive effects of smoke from other people's cigarettes on the risk of death below the 1990 goal. No data exist to assess progress toward achieving the fifth objective.

Trends in Public Attitudes About Smoking and Smokers

This Section describes trends in public attitudes about smoking in general and about smokers.

Involuntary Smoking as an Annoyance

Since 1964, the population has become increasingly annoyed by exposure to ETS. In 1964, less than half of adults (46 percent) thought that it was annoying to be near a person smoking cigarettes (Table 22). Identical questions asked in surveys conducted in 1964, 1966, 1970, and 1975 reveal an increase in the proportion of adults who were annoyed by being near a person who is smoking (from 20 to 35 percent among smokers and from 64 to 77 percent among nonsmokers). By 1986, 42 percent of smokers and 80 percent of nonsmokers reported that they were annoyed by the smoke from another person's cigarette. The 1987 NHIS (preliminary first-quarter data) obtained results similar to those of the 1986 AATS.

Nonsmokers' Rights

According to Gallup surveys, the proportion of adults who feel that smokers should refrain from smoking in the presence of nonsmokers increased slightly between 1963 and 1987. In 1963, 69 percent of adults thought that smokers should refrain from smoking in the presence of others (Table 23). By 1987, 77 percent of adults (64 percent of smokers and 86 percent of nonsmokers) thought that smokers should refrain from smoking in front of others.

In the 1987 Gallup survey, respondents were asked where smokers should refrain from smoking when nonsmokers are present. The proportions who believed that smokers should not smoke in the presence of nonsmokers were 62 percent with respect to public places, 34 percent with respect to work, and 19 percent with respect to the home (ALA 1987).

In a 1987 survey conducted for AMA, respondents were asked, "Which do you feel is a more important individual right, the right of smokers to smoke anywhere, or the right of nonsmokers to a smoke-free environment?" Three-quarters of respondents (75 percent) thought that nonsmokers had the right to a smoke-free environment (49 percent of smokers and 86 percent of nonsmokers), compared with 10 percent who thought that smokers had the right to smoke anywhere (25 percent of smokers and 5 percent of nonsmokers) (Harvey and Shabat 1987).

TABLE 22.—Trends in public attitudes about exposure to environmental tobacco smoke

Survey	Year	Reference	It is annoying to be near a person who is smoking cigarettes (percentage who agree by smoking status)				
			Current smokers	Former smokers	Never smokers	All nonsmokers	All adults
1 AATS	1964	US DHEW 1969	20	49	69	64	46
2 AATS	1966	US DHEW 1969	26	52	70		48
3 AATS	1970	US DHEW 1973	34	63	78	73	59
4 AATS	1975	US DHEW 1976	35	72	79	77	63
5 Roper	1978	Roper 1978	5			60	
6 AATS	1986	US DHHS, in press	42	73	83	80	69
7 NHIS ^a	1987		34	73	85		67

^aPreliminary first-quarter data (unpublished).

NOTE: Actual questions.

1-4 It is annoying to be near a person who is smoking cigarettes (strongly agree, mildly agree, no opinion, mildly disagree, strongly disagree).

5 Is the smoke from someone else's cigarette very annoying to you, somewhat annoying to you, or not annoying at all?

7 In general, would you say the smoke from other people's cigarettes is very annoying to you, somewhat annoying to you, or not at all annoying?

^aPercentages include those who "strongly agree" or "mildly agree."

^bPercentages include those who state that smoke from someone else's cigarette is "very annoying" or "somewhat annoying."

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CHAPTER 5

PHREY

CHANGES IN SMOKING BEHAVIOR AND KNOWLEDGE ABOUT DETERMINANTS



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THE GALLUP ORGANIZATION

**The Tobacco Industry Summons Polls to the
Witness Stand**

A Review of Public Opinion On The Risks of Smoking

by

Lydia Saad, The Gallup Organization
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Prepared for presentation at the annual meeting of
The American Association for Public Opinion Research
(AAPOR)

St. Louis, MO

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PLAINTIFF'S
EXHIBIT

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SUMMARY

This paper examines the way one of the major tobacco companies in the United States, R.J. Reynolds Tobacco Corporation, has utilized public opinion poll data as a successful defense tool in claims brought against it by individual smokers and their families.

In the past, the tobacco industry's primary defense in such lawsuits was to argue that cigarette smoking did not cause cancer – or at least that the medical connection between smoking and cancer could not be proved. More recently they have switched strategies and now emphasize that the connection between smoking and cancer has been common knowledge for decades, even centuries. Therefore, argue tobacco defendants, individual smokers are solely responsible for the health problems associated with their decision to smoke. However, even with the industry's earlier defense strategy, the issue of the risk assumed by informed smokers was a secondary defense and a critical factor working in their favor.

This paper focuses on poll evidence presented in court by Lacy Ford, Ph.D., on behalf of R.J. Reynolds. Dr. Ford is a University of South Carolina history professor who has served as an expert witness on public opinion for R.J. Reynolds in at least two recent lawsuits.

Relying on extensive historical research and his personal inferences as a trained historian, Lacy Ford has testified in court that the risks of smoking have been "common knowledge" in this country for decades or longer. In addition to many historical references and anecdotes, Dr. Ford presents jurors with poll data, mostly from the Gallup Poll, which suggest that as early as 1949 a majority of Americans were aware of the risks of smoking.

By all accounts, Dr. Ford's testimony has proved highly persuasive to juries. That testimony, however, leaves out a variety of Gallup data from the 1950s and 60s which go beyond mere "awareness" and reveal the public's true level of *belief* and understanding about the connection between smoking and cancer.

Belying Lacy Ford's conclusions, a review of historical Gallup surveys suggests that there was, in fact, a high degree of public doubt and confusion about the dangers of smoking in the 1950s and 60s. There may have been widespread awareness of the controversy over smoking, but public *belief* that smoking was linked to lung cancer trailed far behind this general awareness of the controversy.

The legal question at the core of these cases is whether average Americans (or average teenagers) understood the risks they were taking when they began smoking thirty or forty years ago. Looking at Gallup data in the public domain, it is difficult to conclude that they did.

This is not to say that R.J. Reynolds or their expert witness, Lacy Ford, have committed any legal violations with respect to the use and interpretation of Gallup or

other poll data. Courts allow defendants and plaintiffs alike broad latitude in arguing any reasonable inference in their favor. As pollsters we may disagree with Ford's analysis of poll data, just as members of his own field might differ with his historical research, but he appears to be operating within the broad latitude afforded expert witnesses in trial settings. The burden falls on the plaintiffs in these cases to correct any testimony which appears to be misleading through cross-examination or through their own presentation of alternate data. It also falls on members of the polling industry to correct the public record when egregious errors are made in the reporting or interpretation of their data.¹

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INTRODUCTION AND OVERVIEW

"If the user or consumer... is aware of the danger, and nevertheless proceeds unreasonably to make use of the product and is injured by it, he is barred from recovery."

Restatement of Torts, American Law Institute¹

On the basis of a variant of this fundamental tenet of tort law, smokers and their families have been losing cases against the tobacco industry throughout the last forty years. Approximately 500 cases against cigarette manufacturers have already been adjudicated², with hundreds more currently pending. Time and again, the tobacco companies have successfully convinced juries that the connection between smoking and diseases such as lung cancer has been common knowledge in the American culture for at least a century and, therefore, plaintiffs are responsible for the results of their voluntary decision to smoke. It is known, in the law, as "assumption of risk."

The principle of personal responsibility was also raised in the recent case involving the State of Minnesota against the tobacco industry. That case ended this May in a 6.1 billion dollar settlement; however in preliminary court documents for the case, the tobacco industry defendants stated:

Defendants argue that whether or not consumers smoke cigarettes is a matter of individual choice. Defendants assert that individuals are responsible for the choices they make, since information concerning possible health consequences associated with tobacco has been broadly available to the public, and commonly known for decades -- even centuries -- prior to that time. This information was available to and understood by the plaintiffs for decades.³

For people who have smoked many years, the question of when they assumed the risk of smoking proves complicated. Were they mostly responsible for their decision to smoke at the point they started the habit -- perhaps in the 1950s or 1960s, prior to the appearance of Surgeon General warnings on all cigarette packs -- or do smokers continue to assume the risk, and therefore the responsibility for their actions, each time they light up?

The answer is that both sets of issues arise in these trials: 1) what could the person have been reasonably expected to know about the risks of tobacco when he or she started smoking and 2) why did the person continue to smoke? Because of the current knowledge about the addictive nature of smoking, the first issue has become particularly important in trials. As a result, survey research from the 1950s and 1960s -- the era when many of the plaintiffs started to smoke -- has played a critical role in the tobacco industry's defense.

The Lawsuits Being Examined

This paper examines trial documents and news coverage from two recent court cases to determine how public opinion data has been used by R.J. Reynolds Tobacco Corporation to defend itself from negligence and product liability lawsuits.

Dana Raulerson v. R.J. Reynolds involves a Florida woman named Jean Connor, who started smoking at age 15 in 1961. She was diagnosed with lung cancer in 1991, and died from the illness in 1995 at age 49. Thereafter, Connor's sister, Dana Raulerson, filed a wrongful death suit against R.J. Reynolds Tobacco Corporation, the maker of the brands Winston and Salem cigarettes which Connor had smoked a majority of the time. The *Raulerson* case went to trial in April of 1997 and on May 5, 1997 the jury found RJR not responsible for her death.

In *Jordan Karbiwnyk v. R.J. Reynolds*, Ms. Karbiwnyk herself sued the tobacco company for negligently failing to warn people of the risks of smoking when she took up the habit in her teens. Ms. Karbiwnyk started smoking in the early 1950s when she was 16 or 17, and quit in 1984. However, in 1995 she was diagnosed with lung and uterine cancer that spread to her brain. The *Karbiwnyk* trial lasted three weeks in October of 1997 and the jury again returned a verdict in favor of RJR.

Both cases showcase a lawsuit and a defense which have been played out over and over in tobacco cases, and in these two instances involve the same defendant, the R.J. Reynolds Tobacco Company, the same lawyer for the plaintiff, Norwood S. "Woody" Wilner, and the same star witness for the defense, Lacy Ford, a University of South Carolina history professor and tobacco historian.

At the outset of the *Raulerson* case, things looked promising for the plaintiffs. Their Jacksonville, Florida attorney, Woody Wilner, was armed with never-before-released tobacco industry documents from as early as the 1940s that purported to show that RJR was aware that their products caused cancer but, nevertheless, continued to market smoking as glamorous and safe.

Although there were other issues, Raulerson's case sought to prove that R.J. Reynolds Tobacco acted negligently by not adequately warning the public about the risks of smoking - particularly before 1970 when Congress required cigarette makers to print stronger health warnings on their cigarette packages.¹

¹ In 1965 Congress passed the Federal Cigarette Labeling and Advertising Act, requiring health warnings on all cigarette packages reading "Caution: Cigarette Smoking May be Hazardous to Your Health." In 1970 Congress enacted the Public Health Cigarette Smoking Act of 1969, requiring a stronger health warning on cigarette packs, reading "Warning: The Surgeon General Has Determined that Cigarette Smoking is Dangerous to Your Health."

Indeed, some of Woody Wilner's tobacco industry evidence suggested that RJR had deliberately misled the public about the severity of the dangers, and had targeted its marketing at teenagers -- Jean Connor's age group at the time she started smoking.

By all accounts the jurors in the *Raulerson* case were convinced by the evidence presented at trial that RJR had deceived the public. Interviews with jury members immediately after the trial ended suggest that they were highly troubled by this deception and had little or no sympathy with the tobacco company. However, largely on the basis of Lacy Ford's testimony, the jury determined R.J. Reynolds Tobacco was not liable for Jean Connor's death.

...jurors have given interview after interview about their eight hours of deliberations. They want it known that they don't hold the maker of Winston and Salem cigarettes blameless. But they said they had to follow the law and couldn't punish Reynolds for Jean Connor's death at age 49. 'It was really quite alarming,' said jury forewoman Laura Barrow, 26, a former smoker. 'We really were letting R.J. Reynolds off the hook.'

Florida Times Union, May 8, 1997

So why did the jury side with RJR and not the plaintiff? In his instructions to the jury, the judge told the panel that if the risks of smoking were common knowledge among Americans, regardless of whether Reynolds informed or misinformed them about those risks, that Reynolds was not liable for Jean Connor's death.

According to one newspaper account of the trial, jurors felt that common knowledge was "obvious" from the testimony of Professor Lacy Ford on Reynolds' behalf.

"I don't know how you dispute Gallup polls," said juror Meg Goodrich, 35, a non-smoker and Sprint human resources manager. She cited a 1954 poll that Ford presented showing that 90% of Americans read or heard that smoking could cause cancer."

Florida Times Union, May 8, 1997

Lacy Ford

Lacy Ford is a member of the history department at the University of South Carolina, where he received his doctoral degree in history. He specializes in 19th and 20th Century American history, as well as in the history of the South. Dr. Ford was hired as an expert witness for the Reynolds Tobacco Company. His job in the *Raulerson* and *Karbiwryk* cases was to describe the extent to which the dangers of smoking were common knowledge in American culture. He testified, based on his expert opinion and reading of history, that prior to 1970 the health risks of smoking were widely known.

According to his own testimony, Lacy Ford has no special expertise in polling. In his deposition with Woody Wilner for the *Karbiwnyk vs. R.J. Reynolds Tobacco* case, Ford is asked about his expertise in interpreting poll results (see below).

LACY FORD DEPOSITION RE: CREDENTIALS⁶

Q Well, there are statistical issues in the interpretation of polls which involve how reliable the poll is based on the sample size and so forth, right?

A That's correct, yes

Q All right. And then isn't there a psychological dimension to polling where the interpretation of the question becomes the issue, not the mathematical tabulation of the results or not?

A It is - I'm not - I am a historian and not a political scientist. But it is my understanding that currently research on the psychology of polling is a topic that political scientists are looking into. That is not as relevant an area of inquiry for historians as it is for political scientists, because we do not generally have the kind of detailed polling data that they can - that is currently generated in exit polls from elections, for examples, where political scientists can get into that type of information.

Q So your expertise does not extend to evaluation of the psychology of polling from a scholarly basis?

A I didn't intend to say that exactly. I think as a historian I can examine the questions as phrased by pollsters for possible bias and as being leading, as questions can be. At the same time, I'm not - I do not claim to be an expert on the current political science literature on that subject.

Q So did you identify any textbooks or scholarly articles on polling other than just the statistics of polling that are known to you?

A I have had as part of my general training for my Ph.D. and indeed some post-doctoral work that I had done some training in statistics and some knowledge of poll interpretation and I had done some reading in that regard as part of my general background and preparation.... (in) matters relating to sample size, but also in the way questions are constructed.

FINDINGS

RJ Reynolds' Polling Defense

During direct examination by the Reynolds' defense lawyer (E.C. Deeno Kitchen) in the *Karbiwnyk* case, Lacy Ford makes the following statement about public awareness of the risks of smoking:

It is my opinion based on the -- the research and analysis that I've undertaken that it has been common knowledge among the American public pretty much throughout the 20th Century that cigarette smoking is reported to be hazardous to your health and that it can cause a variety of diseases, including lung cancer, that the public has been broadly aware and informed of that -- of those issues throughout the decades that I've studied.^{viii}

At one point during the same examination Ford goes even further:

Q. (by Mr. Kitchen) Did you discover by reviewing the polling data that historians, I believe you said, relied on in your research to indicate that all of this information we have been talking about, about cigarettes and lung cancer, cigarettes hard to quit, habit-forming, whatever, was getting through to the public?

A. (Lacy Ford) Yes I did. There is very substantial evidence to that effect.^{ix}

Dr. Ford based his conclusion -- that the risks were widely known and "getting through to the public" -- on a variety of sources which he discusses in court, including national newspaper and magazine references to smoking, local newspapers from the area in which the plaintiff lived, curriculum and approved textbooks used in the area where the plaintiff grew up, television, entertainment, popular culture, and poll data.

Dr. Ford spent extensive time in court discussing a wide array of qualitative information he gleaned from a broad study of the news and popular culture. He cites a string of prominent public figures, such as Henry Ford, Thomas Edison and Knute Rockne, who each spoke out during their day against tobacco. He discusses a 1948 teachers guide about the harmful effects of tobacco, and he describes state laws restricting the sale of tobacco in the late 1890s and early 1900s. He cites historical slang words used for cigarettes such as "coffin nails" and "cancer sticks" as further evidence that awareness of the risks of smoking had permeated the American culture decades, perhaps centuries, ago.

However, the most persuasive information Ford conveyed to jurors in the *Raulerson* case seems to have been public opinion poll data. According to a *Wall Street Journal* article titled "How RJR Won Its Latest Tobacco Case:"

Juror Meg Goodrich, a 35-year-old human-resources manager for Sprint, says that one key exhibit was a Gallup Poll taken in 1954, six years before Ms. Connor started

smoking, showing "90% of all Americans have read or heard that cigarette smoking can cause cancer." Even more persuasive, she says, was a nationwide Senior Scholastic magazine poll of 10,000 high-school students in 1960, the year before Ms. Connor first lit up, showing only 2.6% thought smoking had no connection with cancer. "I think that one weighed heavily," Ms. Goodrich says. "It was her age group."

Wall Street Journal, May 7, 1997ⁱ

The 90% figure was highly persuasive because of the very specific definition of "common knowledge" within which Laoy Ford framed his testimony. According to Dr. Ford, common knowledge does not require belief, just "awareness." When asked during cross-examination in the Karbiwnyk case to clarify his definition, Ford says:

My testimony is that I believe that awareness polls are a more closer, more proximate measure of common knowledge of what the public knows than polls which address beliefs. I think that you can use belief polls, you can certainly study those in conjunction with awareness polls, but I think awareness polls are better pieces of information.^{x1}

And here is his answer when asked what percentage of Americans have to know something for it to be considered "common knowledge"

I think that it is not possible for me to give a definition of common knowledge that is purely quantitative in nature. I think quantitative measures are important, very important to consider in constructing an opinion about common knowledge, but I do not believe it is possible to give a precise percentage figure without looking at the whole environment of evidence and facts and information that's at the historian's disposal.^{x11}

When it came to survey data, Dr. Ford indicated that he relied primarily on polls available in the public domain, which he obtained online through his membership in the Roper Center for Public Opinion Research at the University of Connecticut. In his own words, he relied on "respected national polling organizations... Gallup and Harris were probably the main ones."

In Dr. Ford's testimony before the jury in both the *Raulerson* and *Karbiwnyk* cases, he used a variety of poll results from surveys conducted prior to 1970 to prove that the risks of smoking were common knowledge among Americans during this period. These results included:

- The 1954 Gallup poll showing that 90% of Americans had read or heard that cigarette smoking may be a cause of cancer of the lung.
- Results of Gallup Poll questions about whether cigarette smoking is harmful or not to one's health, starting with a 1949 survey when 52% of Americans felt it was harmful, and rising to 90% in a 1977 survey.

- A 1960 reader survey published in *Senior Scholastic Magazine*, showing that of 10,768 junior and senior high school students responding to the survey, only 2.6% thought smoking had no connection with lung cancer.

Overview of Gallup Data on the Risks of Smoking

The Gallup Organization began measuring public awareness of the possible health risks of smoking in 1942 with a question asking Americans whether or not they had read a July 1942 *Readers Digest* article about cigarettes and, if so, whether or not the article had "made any difference in their buying of cigarettes." According to the Gallup survey, 25% of Americans said they had read the *Readers Digest* article. Among smokers who read the article, 22% of them (representing 4% of the general public) said it made a difference in their buying of cigarettes. No specific mention was made in this survey, however, of the specific health risks of smoking. Also, the question was not precise in determining whether the effect of the *Readers Digest* article was negative or positive on one's decision to smoke.

The first time Gallup directly addressed the connection between smoking and cancer was in a January 1954 survey. After asking respondents about their personal smoking habits, Gallup posed four questions about the possible health risks of smoking cigarettes, starting with a very general question about it being "harmful" and ending with a very specific one about lung cancer. The question sequence was important in accurately measuring several aspects of the perceived risks of smoking, including unaided identification of cancer as a health risk, awareness of the controversy over the risks, and belief in the specific postulation that smoking is a cause of lung cancer.

The results, shown below, indicate that there was widespread belief in 1954 that smoking was "harmful" (70%) but that top-of-mind recollection or awareness that it caused cancer was extremely low (7%). Similarly, there was widespread awareness of the controversy that smoking might be a cause of cancer (83%), but much lower belief that it was indeed true (41%).

TABLE 1: TOBACCO ATTITUDES, JANUARY 1954^a

Q 14a Do you think cigarette smoking is harmful, or not?	70% say "Yes"
Q 14b In what way do you think cigarette smoking is harmful?	7% mention "cancer"
Q 15 Have you heard or read anything recently that cigarette smoking may be a cause of cancer of the lung?	83% say "Yes"
Q 16 Do you think cigarette smoking is one of the causes of lung cancer, or not?	41% say "Yes"

At first glance, the high percentage of Americans in 1954 who believed smoking was harmful would seem to provide strong evidence in R.J. Reynolds' favor. As shown in the trend, below, as early as 1949 a majority of Americans considered smoking harmful and by 1977 that had reached 90%.

TABLE 2

Do you think cigarette smoking is harmful, or not? (GALLUP POLL)

	YES	NO	NOT SURE
	%	%	%
90 Jul 6-8 (*)	86	3	1
81 Jun 26-29	81	7	2
77 Aug 19-22	90	7	3
54 Jan 9-14	70	23	6
49 Nov 1-5	60	33	7

WORDING VARIATION (*) Do you think cigarette smoking is harmful to your health?

However, the follow-up question asked in January of 1954, indicates that "harmful" did not have the same meaning in 1954 as it perhaps does today. Of the 70% of Americans who felt smoking was "harmful" in 1954, only 8% (equivalent to 6.6% of all Americans) mentioned cancer as an example of how it is harmful. Another 36% mention medical risks that could be viewed as serious, while more than half mention less serious risks, such as "coughing," or vague, non-health related effects.

This data is particularly important because reviewing it in 1998 helps to diffuse the problem of "present-mindedness" which can interfere with modern interpretations of historical events and facts. Lacy Ford himself defines present-mindedness in his testimony, in reference to the skills a historian needs when conducting research. However, he does *not* employ the technique with survey data, generally, or with public opinion about the "harmfulness" of cigarette smoking, specifically.

*Present-mindedness is another mythological flaw that we always warn our students against that is they - we have to recognize that historical actors, people making decisions in the historical past were operating in different information environments than we are today. They didn't always know the kinds of things that we know now, so we have to, in trying to analyze their actions, understand what they knew at that time, what information they had... at their disposal.*iv*

Applying this standard to public opinion, an easy mistake for modern researchers and juries to make would be to assume that the word "harmful" conjured up the same type of serious medical conditions in the 1940s or 50s as

it does today. The 1954 open-ended answer to this question suggests that cancer did not loom very large in the public's consciousness about the health risks associated with smoking and that, in general, the perceived risks of smoking were much less serious than what we would expect from the public today.

TABLE 3

In what way do you think cigarette smoking is harmful? (GALLUP POLL, January 1954)

Unaided Responses	% Based on those asked (70%)	Re-percentage based on Total
Cancer-Related Messages (6.6% of Total Sample)		
Causes lung cancer	6	3.6
Causes cancer, throat cancer	3	2.1
Other Specific Diseases (7.1%)		
Causes tuberculosis	2	1.4
Causes allergies, asthma	1	0.7
Serious Health Risks (34.3%)		
Bad for lungs, bronchial tubes	31	21.7
shortens breath/affects breathing	12	8.4
Harmful to heart/causes heartburn/increases pulse	6	4.2
Other Health Effects (38.2%)		
Harmful to general well being, health, makes one feel run down, dopey	20	14.0
Causes coughing	12	8.4
Harmful to nose and throat/sinuses	11	7.7
Hinders appetite/causes indigestion/affects weight	6	3.5
It's a poison/an irritant	6	3.5
Harmful to ulcers	1	0.7
Causes hearing failure	1	0.7
Interferes with circulation	1	0.7
Non-Physical/Non-Medical Effects (15.4%)		
Gets the best of you	7	4.9
Makes people nervous	6	4.2
Expensive, habit-forming, requires self-discipline	6	4.2
Causes bad breath/yellows teeth, fingers	2	1.4
Impolite/stinks the house	1	0.7
Miscellaneous (uncoded)	4	2.8
No opinion	12	8.4

Further evidence that Americans registered low top-of-mind awareness of the smoking and cancer connection in 1954 is found in the responses to another Gallup question asked twice that year. Respondents who indicated in the survey that they formerly smoked cigarettes were asked to explain the reason why they stopped smoking. In January of that year only 3% of ex-smokers mentioned cancer as a reason; in June of that year, only 2% did.

After probing respondents' smoking habits in both the January and June 1954 surveys, Gallup then asked respondents specifically about their awareness of the controversy over smoking, followed by soliciting their opinion about the connection between cancer and smoking. Awareness was 83% in January and rose to 90% in June. At the same time there was no change in the percent who believed smoking caused cancer (41%).

TABLE 4

Have you heard or read anything recently that cigarette smoking may be a cause of cancer of the lung? (GALLUP POLL)

	YES	NO	NOT SURE
	%	%	%
1954 Jun 12-17	90	10	-
1954 Jan 9-14	83	18	-

Gallup stopped asking the introductory "heard or read" question after 1954, but continued to track public opinion about the connection between smoking and cancer into 1990.

Here is what the trend shows:

- In 1954 -- the approximate time that JoAnn Karbiwnyk started smoking -- Americans were clearly uncertain about the dangers associated with smoking cigarettes. Even in answer to this rather weak test of the perceived connection between smoking and cancer ("do you think cigarette smoking is one of the causes of lung cancer"), less than half the public, just 41%, indicated that they believed such a connection existed, and roughly one in three-- 29-31% -- were equally certain there was no connection.
- From January of 1954 to May of 1960, no more than 50% of Americans were certain that smoking was a cause of cancer. Between one-fourth and one-third of the public during this period believed smoking was not a cause, while roughly one-quarter were unsure.

- When the question was next asked in 1969, belief that smoking causes cancer had jumped to 70%.
- Thereafter, the figure increased gradually by, on average, about 1% each year, until 1990, the last year the question was asked, when 94% responded "yes," representing almost universal belief in the cigarette-cancer connection.

TABLE 5

What is your opinion - do you think cigarette smoking is one of the causes of lung cancer? (GALLUP POLL)

	YES	NO	NOT SURE
	%	%	%
90 Jul 6-8	94	4	2
81 Jun 26-29	83	10	7
77 Aug 19-22	81	11	8
72 Apr 21-24	70	13	17
71 May 14-17	71	16	13
69 Jul 24-28	70	11	19
60 May 26-31	60	28	22
58 Jul 10-15	44	30	26
57 Nov 28-Dec 4	47	32	21
57 Jun 27-Jul 2	60	24	26
54 Jan 12-17	41	29	30
54 Jan 8-14	41	31	29

Throughout this time period, a rather substantial gap persisted in the percentage of smokers and non-smokers who believed the connection between cigarettes and cancer was true - generally on the order of 20 points. Even in 1977 and 1981, when nationwide belief in the risks of smoking was over 80%, more than one in four smokers continued to doubt the relationship to some degree. In 1990, however, the gap dropped to a low of 10 points.

While the reason for the gap in belief between smokers and non-smokers could be debated, it certainly opens the door for an argument that cigarette advertising or tobacco industry denials about the link between cancer and smoking created some degree of confusion about the risks. If non-smokers are more disposed to believe the risks (perhaps in the belief that they don't run them) and if smokers tend to quit the habit once they became convinced of the risks, then it would be logical to find a higher degree of doubt among ongoing smokers.

In fact, the 1954 data shows that the people most convinced that cigarettes could cause lung cancer were former smokers (54%). This compared with

48% of those who never smoked, 32% of light smokers, and only 29% of those who smoked a pack or more a day.

TABLE 6

What is your opinion - do you think cigarette smoking is one of the causes of lung cancer? (GALLUP POLL)

Percent "Yes" Shown for Years when Smoker/Non-Smoker Data Is Available

	National Adults	Smokers	Non-Smokers	GAP
	%	%	%	pt. points
1990	86	87	87	10
1981	83	69	81	22
1977	81	72	87	15
1969	79	69	78	19
1958	41	33	64	21
1957	47	35	66	21
1954	44	31	49	18

Problems with Testimony by Lacy Ford

In terms of the national adult survey data he presents, Dr. Ford relies on polling conducted by reputable, well-known survey research firms using scientifically reliable methods. However, beyond this, there are several problems with the data he presents, as well as with his analysis of public opinion about the risks of smoking.

Selective Use of Data

Dr. Ford emphasizes questions which are not representative of all the available questions dealing with the general public's attitudes about the risks of smoking. He relies heavily on Gallup's July 1954 figure that 90% had heard or read smoking may be a cause of lung cancer. At the same time, he dismisses the importance of the concurrent findings that a smaller number of Americans that same year (70%) considered smoking "harmful" or that only 42% thought it was a cause of cancer of the lung. (Never even mentioned by Dr. Ford is the other Gallup finding from 1954 that only 7% mention cancer in an unaided question about the harmful effects of smoking.)

When asked specifically about the percent who believe smoking causes lung cancer Ford responds:

This is a response to what I would call a belief question, not simply are you aware, but do you believe the information you've heard, do you think that it's accurate.

And I think in 1954, 41% is an impressive belief level. It would be important to make a distinction between a belief level and an awareness level. And as I said I believe in my last answer, awareness levels in 1954 were much higher.

When asked in a follow-up question whether the belief figure indicates that in 1954 there is "common knowledge" that cigarettes cause lung cancer, Ford says:

I think I've already answered that question as best I can, because in making my judgments, I'm not seizing on any one piece of information. When you put together a belief level of 41% with an awareness level of 77% and as well as a survey of all of the publicity that's being generated in 1954 of what's being taught in schools, I don't form an opinion based on one piece of information. There's nothing about this one piece of information that suggests a contrary conclusion to my opinion. It doesn't seem to me.... In a belief as opposed to an awareness poll, I don't think that you can draw a ... conclusion about common knowledge. And as I say, this is a statement about how many people believe it. But I want to emphasize again that no historian would hinge an opinion merely on one fact, no matter how impressive or unimpressive it might be when there is a larger body of data available.

Misleading Definition of "Common Knowledge"

Dr. Ford draws overly broad conclusions about common knowledge of the risks of smoking from Gallup's "heard or read" question:

- Firstly, the question sets a very low standard for the connection between smoking and cancer, asking respondents whether they have heard or read that it "may be one of the causes" of lung cancer: not that it may cause cancer or that it be a major cause, just that it may be "one" of the causes.
- Secondly, the question doesn't ask about a fact (have you heard or read that smoking causes cancer), but about a controversy (have you heard or read that smoking may cause cancer).

On that basis (that the question measures awareness of a controversy and not of a fact) the answer is no more indicative of common knowledge about the risks of smoking than, say, is public awareness of UFO's indicative of common knowledge about the existence of alien visitors to earth -- in fact, Gallup data on these two subjects is remarkably similar, and helps to illustrate the fallacy inherent in Ford's reliance on public awareness to the exclusion of questions which measure public belief about the risks.

TABLE 10: AWARENESS V BELIEF

	Yes	No	Unsure
	%	%	%
<u>June 1954</u> Have you heard or read anything recently to the effect that smoking may be a cause of cancer of the lung? (Awareness)	90	10	-
What is your own opinion - do you think cigarette smoking is one of the causes of lung cancer, or not? (Belief)	41	31	29
<u>February 1987</u> Have you heard or read about UFO's (Awareness)	88	12	-
In your opinion, are UFO's something real? (Belief)	49	30	21

Confusing Public Awareness and Public Knowledge

After insisting on a clear distinction between "awareness polls" and "belief polls," Dr. Ford makes an invalid comparison between public awareness of the risks of smoking and public *knowledge* about various events and people in US culture and history using a bar chart exhibit (see data below).

The only comparable item used by Dr. Ford in this chart is the one concerning Watergate; the others require the respondent to give a correct answer to a knowledge question. Yet the inference Ford draws from this bar chart, in front of the jury, is that in 1954 public awareness of the risks of smoking was extraordinarily high.

TABLE 11: PUBLIC AWARENESS OF WELL-KNOWN EVENTS, PERSONS AND FACTS*

Read or heard that Cigarette Smoking May Cause Lung Cancer (Gallup, 1954)	90%
Could Name First U.S. President (ABC, 1983)	89%
Could Identify Lee Harvey Oswald (ABC/Washington Post, 1963)	81%
Heard of Watergate Break-in (Harris, 1972)	78%
Knew that Americans Declared Independence in 1776 (Gallup, 1975)	72%
Knew Who Said "Hi Ho Silver" (Gallup, 1958)	71%
Knew Who Said "What's Up, Doc?" (Gallup, 1958)	40%
Knew Their Congressman's Name (NORC, 1987)	38%
Knew Who Delivered Sermon on the Mount (Gallup, 1954)	34%
Knew Who Said "There's a Sucker Born Every Minute" (Gallup, 1958)	28%

* Exact question wording: In your opinion, are UFO's something real, or just people's imagination?

A more valid comparison would have been to present public awareness that smoking may cause cancer along side with public awareness of other reports or events in the news, as is done in the following table. Gallup has asked several hundred questions about the public's familiarity with items in the news, starting with the phrase "have you heard or read..." As the table below shows, the public was highly aware of many things at various points in recent U.S. history. One could selectively compile a list, as done below, which suggests that awareness of the controversy over smoking was normal, rather than extraordinarily high as Ford suggests.

This does not change the fact that the awareness level is a poor indicator of common knowledge, but it is important to recognize that even the groundwork Ford lays for attaching high importance to the "heard or read" question is flawed.

TABLE 12: TRUE PUBLIC AWARENESS COMPARISONS

Have you heard or read about () (Gallup)	% Yes
Flying saucers (1952)	99%
A disease called AIDS (1986)	98%
Unidentified flying objects - UFOs (1973)	94%
The controversy over silicone breast implants (1992)	92%
That cigarette smoking may be a cause of lung cancer (1954)	90%
The new polio vaccine (1954)	90%

Invalid Teen Data

Unlike the national adult surveys he presents which are statistically valid, Dr. Ford uses a completely unscientific reader mail-in survey from a 1960 issue of *Senior Scholastic Magazine* to characterize teenagers' attitudes about the risks of smoking during that era. He then leads the jury to believe that this is an outstanding survey because of its large (10,000+) sample size.

LACY FORD TESTIMONY RE: SENIOR SCHOLASTIC SURVEY™

- Q Dr. Ford, you told us that this scholastic - Senior Scholastic pole [sic] had a sample of over 10,000 students? **W**
- A That's correct.
- Q When Gallup pole and Harris pole [sic], some of the most reputable poles [sic] in the world, get a sample, do you know what -
- A Generally runs between 15- and 1800.
- Q For polling [sic] purposes, would you consider this an outstanding sample?
- A Any sample that's larger than 15- and 1800 has an extremely small margin of error.

The data collection methods for this survey are subject to extensive problems associated with the absence of random sampling techniques and the potential of non-response bias. The survey was *not* administered to a random cross-section of teenagers, using reliable respondent selection and interview techniques. It was included in a magazine distributed to subscribing high schools across America, and the results are based on all surveys which happened to be returned. Furthermore, there is no information about the socio-economic profile of school districts that participated, about the environment in which the surveys were completed by students, or about the student response rate. Certainly no controls were in place to protect against the equivalent of interviewer-effects introducing systematic bias into the data – such as teachers with an anti-smoking bias being more likely to have their students respond to the survey, or giving students special instruction in the risks of smoking prior to administering the survey.

In addition to relying on non-projectible teen data, Dr. Ford severely strains credulity in his analysis of the *Senior Scholastic* survey, when he uses it to suggest that teenagers in the early 1960s were well informed of the risks of smoking.

Under direct examination, Ford states that "97.4 percent of all students believed, in some form or fashion, that there was a connection between smoking and lung cancer, and only 2.6 percent believed that there was not."¹¹ However, according to the actual responses shown below, only 65% of all students *believed* there was a connection between smoking and lung cancer, only 2.6% *believed* there was not, while 32.2% *felt that there may be a connection, but that the evidence for it was inconclusive*. Furthermore, of the 65% who acknowledged a connection, close to one third (19.6%) believed that only *heavy* smoking – defined as two or more packs a day – increased ones' chances of getting lung cancer over a non-smoker.

TABLE 13

What do you think about cancer and cigarette smoking?	
	Percent
Both light smokers and heavy smokers run a greater risk of getting lung cancer than non-smokers	45.4%
Only a heavy smoker (one who smokes two or more packs a day) runs a greater risk of getting lung cancer than a non-smoker	19.6%
Smoking may have some connection with lung cancer, but there is no conclusive evidence which links the two	32.2%
Smoking has no connection with lung cancer	2.6%
	100.0%

CONCLUSIONS

R.J. Reynolds' attorneys and their expert witness, Lacy Ford, define "common knowledge" about the risks of smoking in a way that maximizes the impact of one particular piece of poll data in the public domain: Gallup's July 1954 finding that 90% of Americans had read or heard that smoking could cause cancer. Dr. Ford discounts the value of concurrent data showing low levels of public belief or understanding of the connection between smoking and lung cancer. Furthermore, he incorrectly draws important conclusions about the perceptions of teenagers, from a thoroughly unscientific poll of high school students.

The resulting impression about teenage and national adult "awareness" of the risks of smoking ultimately contributes to tobacco-friendly decisions by juries. In the *Raulerson* case, it was a favorable decision by a *reluctant* jury.

Dr. Ford's operating definition of common knowledge -- limiting it to awareness to the exclusion of belief -- simply does not coincide with common sense. If just having heard of something makes it common knowledge, then UFO's and flying saucers must be common knowledge too -- since according to Gallup polls, 94% and 99% of Americans, respectively, have heard of each of these.

A valid definition of common knowledge whereby we can hold reasonable people responsible for their own actions, requires a degree of belief that a fact or principle is true. On this basis, depending on the standard for defining what belief means, and for determining the proportion of people who must believe something for it to be common knowledge, we conclude the following:

- It would be incorrect to say that common knowledge about the connection between smoking and lung cancer existed prior to 1960 when less than a majority of the public said they believed this to be the case.
- Between 1960 and 1981, when belief grew from 50% to 81%, it seems the use of the term common knowledge could be honestly debated.
- By 1990, when 94% of Americans said they believed smoking is one of the causes of lung cancer, it could confidently be stated, with little room for doubt, that the link between smoking and cancer was common knowledge. Even at this level of belief, however, it is not clear from the question wording whether Americans who answer "yes" are fully aware of the extent of the health risk.

No doubt, part of the Reynolds Corporation's success in convincing juries that widespread awareness of the risks of smoking in 1954 was equivalent to "common knowledge" is, again, due to the "present-mindedness" problem. It is hard for Americans in 1998 to conceive of a time when their parents, their

grandparents, and perhaps they, themselves, were ignorant of, or at best confused about, the risks of smoking.

At the same time as we criticize the interpretation of polling data by Lacy Ford, it is important to recognize the legal context in which he operates. The opinion polls in these tobacco cases are being presented under the umbrella of an "expert witness" investigation. The court does not require any analysis of the admissibility of these polls in evidence. If it did, the *Senior Scholastic Magazine* survey would never have survived the rigorous examination process of proving that a proper universe was examined, a representative sample was drawn, undue bias in the process was absent, and that generally accepted procedures and standards were followed.

This contrasts with typical litigation scenarios where survey data is presented as evidence. Under those conditions the proffering party must establish foundational requirements to enter the results in evidence. Most commonly this is seen in the use of surveys in litigation of trademark cases where public or consumer confusion is an element of infringement.

Under Federal evidentiary rules (and similar rules in effect in cases governed by state law), an expert witness may rely on facts or data not presented in the courtroom if they are of a type reasonably relied upon by experts in the particular field in forming opinions or inferences on the subject. An example of this rule would be a medical doctor relying upon a blood test which he did not actually perform. The doctor can testify as to the results of this test without the test itself being offered in evidence. This is because doctors rely on tests in performing their duties and, hence, there are guarantees of trustworthiness in allowing an expert to rely on such tests for purposes of testifying.

Most courts in recent years have determined that opinion polls meet the requirement of "reasonably relied upon by experts in the particular field" and may be presented to the jury by an expert witness without laying the proper evidentiary foundation for being entered in evidence. Some courts have interpreted this to mean that a properly qualified expert can testify about a poll, but that the researcher who actually conducted the study cannot.

For long time opinion pollsters it may be rewarding to think that courts have accorded scientific polls the same "guarantee of trustworthiness" status as medical tests insofar as expert testimony is concerned. The challenge remains that the interpretation of opinion polls may not be as uniform as interpretations of medical tests.

Legitimate public opinion research is designed to eliminate bias and find "the truth"—or at the very least attempt to present a non-biased view of current opinion. In the courtroom, however, the only purpose of offering any evidence is to persuade—to create biases. In a courtroom lawyers are allowed to argue any reasonable inference in their favor. Expert witnesses can (within

ethical bounds) take certain liberties with information because the opposing side has the opportunity to discredit the expert's opinions through their own evidence or by means of cross examination. Selective use of accurate survey data is tolerated because of the inherent reliability in the process by which opposing litigants have the opportunity to point out that selectivity.

In other words, the court assumes that both sides will fight equally hard for their version of the truth, and that justice will prevail. In the case of the lawsuits discussed here against the tobacco industry, it was incumbent on the law firm representing the plaintiffs to a) challenge the credentials of Lacy Ford as an expert in the area of polling, b) to challenge Ford's interpretation of the polling data he presented, and c) to conduct their own secondary analysis research to uncover additional survey data that might have been favorable to their case.

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15 MAY, 1998

1998 NATIONAL AAPOR CONFERENCE, ST. LOUIS, MO. 22

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END NOTES

- ¹ American Association for Public Opinion Research Code of Professional Ethics and Practices, Sections I and II, March 1986.
- ² Restatement (Second) of torts (St. Paul, Minn.: American Law Institute, 1965), 402A, comment a.
- ³ Robert A. Levy, Cato Policy Analysis No. 275: "Tobacco Medical Litigation: Snuffing Out the Rule of Law." June 20, 1997.
- ⁴ "Defendants' Contentions." Backgrounder Document, State of Minnesota vs. Philip Morris et al., January 20, 1998.
- ⁵ Bell, Jane D., "Disapproving Jurors: We let Reynolds off the hook." Florida Times Union, May 8, 1997.
- ⁶ Ibid.
- ⁷ Lacy Ford deposition in Karbiwnyk v. RJR, pg.
- ⁸ Karbiwnyk vs. R.J. Reynolds trial transcript, October 17, 1997; Page 2396.
- ⁹ Karbiwnyk v. RJR, October 17, 1997; Page 2459
- ¹⁰ Graylin Milo, "How RJR Won its Latest Tobacco Case." Wall Street Journal, May 7, 1997.
- ¹¹ Lacy Ford deposition, pg. 41.
- ¹² Ibid, pg. 43.
- ¹³ The Gallup Poll, Ballot #525-K, January 9-14, 1994
- ¹⁴ Karbiwnyk v. RJR, October 17, 1997; Page 2386
- ¹⁵ Lacy Ford Trial Exhibit, Karbiwnyk v. RJR
- ¹⁶ Karbiwnyk v. RJR, October 17, 1997; Page 2468
- ¹⁷ Karbiwnyk v. RJR, October 17, 1997; Page 2467.

THE TOBACCO INDUSTRY CALLS POLLS TO THE WITNESS STAND
LINDA SAYS STEVE OBAMA

Appendix A

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15. Have you heard or read anything recently that cigaret smoking may be a CAUSE of cancer of the lung?
☐ Yes, have heard or read ☐ No

16. What is your own opinion—do you think cigaret smoking is one of the causes of lung cancer, or not?
☐ Yes ☐ No ☐ No Opinion
Qualified

17a. What do you like BEST about the Democratic party?

17b. And what do you like LEAST about the Democratic party?

18. What do you think will be the Democratic party's best talking point in the Congressional election campaign next Fall?

19. And what do you think will be the Republican party's best talking point in the Congressional election campaign next Fall?

20a. Just your best guess, do you think Eisenhower will or will not be a candidate for President again in 1956?
☐ Will ☐ Will not ☐ No Opinion

ASK EVERYONE:

b. Would you like to see him be a candidate in 1956?
☐ Yes ☐ No ☐ No Opinion

20b. Just your best guess, do you think Stevenson will be the Democratic candidate for President again in 1956, or not?
☐ Will ☐ Will not ☐ No Opinion

ASK EVERYONE:

c. Would you like to see him be the Democratic candidate in 1956?
☐ Yes ☐ No ☐ No Opinion

21. IN GENERAL, would you say you have a favorable or unfavorable opinion of Senator Joseph R. McCarthy?
☐ Favorable ☐ Unfavorable ☐ No Opinion
☐ Don't know him

Which party would you like to see win the next Presidential election?
Republican party or the Democratic party?
☐ Republican ☐ Democratic ☐ Undecided
☐ Other

IF UNDECIDED, ask:

b. As of today, do you lean more to the Republican party or to the Democratic party?
☐ Rep. ☐ Dem. ☐ Other ☐ Undecided

24a. In the election in November, 1952, did things come up which kept you from voting, or did you happen to vote?
☐ Yes ☐ No, didn't vote ☐ No, too young ☐ Don't remember

IF YES, VOTED, ask:

b. Did you vote for Eisenhower or Stevenson?
☐ Eisenhower ☐ Stevenson ☐ Other

25a. In politics, as of TODAY, do you consider yourself a Democrat, Republican, or Independent?
☐ Democrat ☐ Republican ☐ Independent
☐ Other

IF INDEPENDENT, ask:

b. As of today, do you lean a little more to the Democratic party or a little more to the Republican party?
☐ Dem. ☐ Rep. ☐ Other ☐ Undecided

Now, here are a few questions so that my office can keep track of the cross-section of people I have talked to:

26. What was the last grade or class you completed in school?

☐ No schooling
☐ Grammar School (Grades 1 through 6)
☐ Grammar School (7th or 8th Grade)
☐ High School, Inc. (9th, 10th or 11th Grades)
☐ High School, grad. (12th Grade)
☐ College, Inc. } Record Full Name of College Below
☐ College, grad.

27a. What is your job or occupation?

b. What kind of work does the HEAD OF YOUR IMMEDIATE FAMILY do?

IF RETIRED OR UNEMPLOYED, ask:

c. What did he/she/you do? Write in above.

28. Are you (or is your husband) a member of a labor union?
☐ Yes, I am ☐ Yes, he is ☐ Yes, both are ☐ No

29. What is your religious preference—Protestant, Catholic or Jewish?

☐ Protestant ☐ Catholic ☐ Jewish
☐ Other

30. And what is your age?

PLEASE COMPLETE ALL VITAL INFORMATION BEFORE LEAVING RESPONDENT

RESPONDENT LIVES:

☐ In city or town over 2,500 pop. ☐ In country or town under 2,500 pop. ☐ On farm property
(Non-Farm Property)

Check whether:

☐ White ☐ Colored
☐ Man ☐ Woman

STREET CITY & STATE
Address of Respondent—Street and Number
INTERVIEW OBTAINED IN: ☐ HOME ☐ PLACE OF WORK ☐ OTHER
I hereby attest that this is a true and honest interview.

NO 1625

52119 9465



SPONSORED BY LEADING REPUBLICAN, DEMOCRATIC AND INDEPENDENT NEWSPAPERS

SUGGESTED INTRODUCTION: I'm taking a time interview as a GALLUP POLL. I'd like YOUR opinion on a few leading topics of the day.

Here's the first question I want to ask you.

1. Would you approve or disapprove of having the Government spend 100 million dollars for research to find the causes and cure of diseases of the heart?

☐ Approve ☐ Disapprove ☐ No Opinion

Qualified

IF APPROVE, ask:

2. Would you be willing to pay more taxes to provide this money?

☐ Yes ☐ No ☐ No Opinion

3. Do you approve or disapprove of the way Eisenhower is handling his job as President?

☐ Approve ☐ Disapprove ☐ No Opinion

4. The U. S. Supreme Court has ruled that racial segregation in the public schools is illegal. This means that all children, no matter what their race, must be allowed to go to the same schools. Do you approve or disapprove of this decision?

☐ Approve ☐ Disapprove ☐ No Opinion

5. **WHITE RESP. ONLY:**

Would you object to having your children attend a school where the majority of pupils are Negroes?

☐ Yes ☐ No ☐ No Opinion

ASK EVERYONE BOTH PARTS OF 4 and 5:

4a. The United States is now sending war materials to help the French fight the Communists in Indo-China. Would you approve or disapprove of sending U. S. soldiers to take part in the fighting there?

☐ Approve ☐ Disapprove ☐ No Opinion

5a. Would you approve or disapprove of our sending air and naval forces, but not ground forces, to help the French?

☐ Approve ☐ Disapprove ☐ No Opinion

4b. If the United States gets into a fighting war in Indo-China, as it did in Korea, do you think we should use atomic artillery shells on the Communists?

☐ Yes, should ☐ No ☐ No Opinion

5b. If the United States gets into a fighting war in Indo-China, should we drop hydrogen bombs on cities on the mainland of CHINA?

☐ Yes, should ☐ No ☐ No Opinion

6. What do you think America would gain by getting into a fighting war in Indo-China?

.....

7. Some people say Congress is abusing its powers to investigate. Do you agree or disagree?

☐ Agree ☐ Disagree ☐ No Opinion

Qualified

ASK EVERYONE:

8. Do you think Committees of Congress should continue to investigate Communists, or should this job be left ENTIRELY to the FBI and the Department of Justice?

☐ Cong. ☐ F.B.I.-Justice Dept. ☐ No Opinion

Qualified

9. Government employees are not permitted to reveal secret or confidential information—even to members of Congress—without permission. Do you think this is a good rule or a poor one?

☐ Good rule ☐ Poor one ☐ No Opinion

Qualified

9. Which political party do you think would be more likely to keep the United States out of World War III — Republican Party or the Democratic Party?

☐ Rep. ☐ Dem. ☐ Neither ☐ No Opin.

Now, here are some questions on smoking.

10a. Have you ever smoked cigarettes regularly?

☐ Yes (Ask 10b) ☐ No (Skip to Q. 12a)

IF YES, ask:

b. Do you happen to smoke cigarettes now?

☐ Yes (Ask 10c & d) ☐ No (Skip to Q. 11a)

IF YES, ask:

c. Just your best guess—about how many cigarettes have you smoked in the last 24 hours?

(Int. Get specific number of cigarettes, not packs)

d. Have you ever given up smoking for any length of time?

☐ Yes ☐ No

IF "NO" to 10b (HAS SMOKED BUT DOES NOT NOW SMOKE), ASK:

11a. How long has it been since you smoked cigarettes regularly?

(Int. Get answer in terms of weeks, months, or years)

b. Why did you stop smoking cigarettes?

ASK EVERYONE BOTH PARTS:

12a. Have you heard or read anything recently to the effect that cigarette smoking may be a cause of cancer of the lung?

☐ Yes ☐ No

b. What is your own opinion—do you think cigarette smoking is one of the causes of lung cancer, or not?

☐ Yes ☐ No ☐ No Opinion

Qualified

13. Here's a sort of quiz, such as you might participate on a radio or TV show. I'll read you the names of ten people who have been in the news lately. Please tell me who these people are—what it is they do.

a. Robert Stevens?

b. Joe McCarthy?

c. Anthony Eden?

d. Casey Stengel?

e. Karl Mundt?

f. Joseph Welch?

g. Stuart Symington?

14. Here's an interesting experiment. (HAND RESPONDER SCALOMETER) You notice that the 10 boxes on this card go from the HIGHEST POSITION OF PLUS 5—or something you like very much—all the way down to the LOWEST POSITION OF MINUS 5—or something you dislike very much. Will you put your finger on any one of the 10 boxes which best tells how you feel about...

—PLUS— No —MINUS—

5 4 3 2 1 Opn. -1 -2 -3 -4 -

a. Finding \$100? ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

b. Losing \$100? ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

c. Robert Stevens? ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

d. Joe McCarthy? ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

e. Karl Mundt? ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

f. Joseph Welch? ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

g. Stuart Symington? ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

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10

PLAINTIFF'S
EXHIBIT

10

3-24-66 AG

Smoking and news

Coverage of a decade of controversy

Has American journalism given a full, fair, and intelligent account of the complex debate over the effects of smoking on health? In this report, the staff of the Review inspects the evidence since 1953 and offers preliminary answers. The report warns, however, that the crucial tests are yet to come.

For months, the trade press of journalism, advertising, and business has been emphasizing a perilous passage for the tobacco industry of the United States. An executive of the largest tobacco manufacturer was quoted in the January, 1963, *Fortune*: "Fate has conspired to make this particular moment a testing time for tobacco."

Fate's form is clear: The long continued scientific efforts to establish a clear causal relationship between smoking and lung cancer are reaching a climax, and focus now on a single expected event: the report of the United States Surgeon General's Advisory Committee on Smoking and Health. The tobacco industry has long feared a report affirming a relationship between smoking and cancer, fatalities, and for subsequent formidable attempts to regulate the manufacture, use, and advertisement of tobacco.

For the institutions of journalism, too, it is a testing time. American journalism, a commercial enterprise, has long had to contend with charges that its news was managed by commerce. This type of charge is never fully refuted; each new situation is a test. In the tobacco-and-health question, the terms of the test can be put simply:

1. Is the public being given a full, fair, balanced account of the evidence—that is, the best of which the resources of the news media are capable?
2. Are the institutions of journalism handling re-

sponsibly the acceptance of cigarette advertising?

sponsibly the acceptance of cigarette advertising?

3. Is the performance of journalism good enough to eliminate the suspicion that its news policies are affected by such advertising?

A good share of the record is already available. Since the early 1950's, editors, reporters, and executives have been faced continually with decisions on treatment of tobacco news and tobacco advertising. The difficulty of these decisions should not be underestimated. On the one hand, such news dealt potentially with the health of more than 70,000,000 Americans and millions more yet to come of age; on the other, it dealt with the destiny of a manufacturing and agricultural enterprise with receipts of more than \$7,000,000,000 a year.

The importance of such subject matter would seem almost self-evident, especially when it is buoyed by a natural and increasing public interest in matters pertaining to personal health. Yet the record of coverage in three major media—newspapers, magazines, and television—shows patches of inertia, lack of decision, or simply avoidance.

The chronology

The record can best be surveyed in the perspective of a brief review of major developments.

The first study that lifted evidence against cigarettes out of the category of the old "coffin-nail"

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imprecation came in 1938 when Dr. Raymond E. Pearl of The Johns Hopkins University presented "life tables" for 6,813 men showing "that smoking is associated with a definite impairment of longevity."

From 1919 to 1953, an outpouring of studies offered statistical evidence connecting cigarette smoking with lung cancer and other ills, particularly heart trouble. In clinical research, Dr. Ewart A. Graham of Washington University in St. Louis, announced that he had produced skin cancer in mice from tobacco tars.

In 1954, The American Cancer Society released first results of a survey of 187,000 men between the ages of 50 and 70. The study, conducted by Drs. E. Cuyler Hammond and Daniel Horn, showed that cigarette smokers had a death rate from all diseases 75 per cent higher than non-smokers and that lung-cancer death rates were 5 to 16 times higher for smokers. Earlier in the same year, the tobacco industry had founded the Tobacco Industry Research Committee to investigate the subject and to "communicate authoritative factual information."

In 1957, the American Cancer Society presented its final report, which emphasized hazards to heavy smokers. A little later, the federal government noted the relationship for the first time when the Surgeon General announced that "there is an increasingly consistent body of evidence that excessive cigarette smoking is one of the causative factors in lung cancer." In July, a House subcommittee heard testimony on the evidence and rebuttals.

In 1961, the controversy reached the courts when a judge ordered the retrial of a suit brought by a Pittsburgh cabinet-maker against Liggett & Myers, on the ground that Chesterfield cigarettes had caused his cancer of the lung. The jury decided in the plaintiff's favor in 1962, but awarded him no damages.

In 1962, the most ambitious study since the American Cancer Society reports was issued by the British Royal College of Physicians. It concluded: "The evidence that cigarette smoking often has harmful and dangerous consequences is now so convincing that preventive measures are undoubtedly needed." In the United States, the Air Force stopped gifts of cigarettes to hospitals by tobacco companies; the Surgeon General appointed his committee. In the wake of recommendations made in Britain, Italy, and Denmark, there was a campaign mounted against cigarette advertising directed at the young.

The year 1963 has been marked by increasing interest in the issue by parties outside either the tobacco industry or medical research. In Congress and state legislatures, bills regulating the sale or advertising of cigarettes have been receiving consideration. In addition, a scattering of cities and states is distributing

AN EXPLANATORY STATEMENT

The bulk of the material for this article was compiled by Arthur E. Rowse, an assistant city editor of *The Washington Post*. Mr. Rowse, who is currently at work on a manuscript about economic pressures on the press, has asked that his byline not appear on the article because of his disagreement with the revisions and conclusions of the *Review* editors. He offers the following statement: "The revisions in my manuscript fail to recognize two things: (1) the full significance of the scientific evidence against smoking and (2) the extent of indirect as well as direct influence of tobacco interests on news coverage in all media. I would particularly like to point out the contrast over the years in editorial attention to advertiser-related smoking hazards and the attention given to such non-commercial menaces as polio, tuberculosis, influenza, suicide, and murder, all of which together kill fewer people each year than lung cancer."

For its part, the *Review* (1) does not believe its function is to evaluate the scientific evidence and (2) does not believe that Mr. Rowse's conclusions about industry influence on the press were justified by either his facts or the other facts available.

literature warning youngsters of smoking. Finally, state medical societies, hitherto reticent, have begun to speak out, condemning smoking in various degrees. The American Medical Association declined at its most recent convention to take such a position.

The industry's position has remained little changed through the successive waves of findings. It has held that there is no conclusive evidence of causal relationship and that no one has yet produced lung cancer in laboratory animals.

A recent statement of this position was issued in April by Dr. Clarence Cook Little, scientific director of the Tobacco Industry Research Committee:

"Science does not yet know enough about any suspected factors [in lung cancer] to judge whether they may operate alone, whether they may operate in conjunction with others, or whether they may affect or be affected by factors of whose existence science is not yet aware. Indeed, it is not known whether the factors actually are 'causative' in any real sense."

Coverage: The newspapers

How have news and information outlets covered these developments? The answer depends in great part on what one considers the best forms for this coverage. There is no doubt that there has been sufficient straight-news coverage to make a great share of the public aware of the issue, if not its substance. As early as June, 1954, a Gallup Poll found that 90 per

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cent of its national sample had heard or read something about smoking's presumable link to cancer.

Nonetheless, coverage of such developments was under scrutiny even as early as the time of Dr. Pearl's study in 1938. At that time, George Seldes and Harold Kes accused the New York City papers of having omitted or buried the news. The library copies of eight papers confirm the charges. Only the *Times* and the *World-Telegram* ran accounts of the study.

The amount and frequency of material in the 1950-54 period sent shock waves through tobacco stocks and caused cigarette sales to drop for the first time in twenty-one years. These trends bespeak widespread coverage. But it was at this time that the industry's research committee was organized, nearly every story from this point contained a TIRC statement dismissing the evidence as inconclusive. These repetitious responses soon lost any inherent news interest; it is also conceivable that they may have broadened coverage by encouraging publication of stories that might otherwise have been killed for lack of reply.

A check of a sample of papers reveals a more serious disturbance in the transmission of tobacco-and-health information: the on-and-off effect of processing through the daily newspaper. A story will fit in the paper on one day; one of apparently equal importance will be squeezed out on the next.

Nor have the chances been improved by the character of the stories: They have never been completely conclusive. They have often been stretched out over a period of several days, or have cropped up in fragments on single, widely separated days.

From the news events of the last ten years, there were selected thirteen days on which major stories were available. The earliest was the announcement of the Cancer Society's preliminary report, available to morning papers on June 21, 1954. The most recent was the issuance of the British report on March 8, 1962. Although a larger sample of newspapers was examined for each event, a core of the library editions of a dozen major morning papers was used to measure overall use.* The results were as follows:

1. The Cancer Society's preliminary findings, available for morning papers of June 21, 1954: With only

one apparent exception, the dozen sample papers used the story, with five putting it on page one.

2. The final Cancer Society report, available June 5, 1957. All of the dozen papers used it, six on page one. This was the most extensively used and displayed of all the stories.

3. The announcement by the Surgeon General saying there was a cause-and-effect relationship, available July 12, 1957. Only one omission was noted; the majority did not put the story on page one.

4. An additional announcement by the Surgeon General that scientists had found benzopyrene, an agent suspected of causing cancer, in cigarette smoke, available July 16, 1957, with detailed stories from the wire services. None of the dozen placed the story on page one; seven omitted it.

5. The hearings on filters, stories available for papers of July 19, 20, 24, 25, 26, and 27.

July 19: Dr. Cuyler Hammond described the Cancer Society study. In the afternoon, Dr. Clarence Cook Little, of the TIRC, denied the validity of statistical findings. Most stories led with Dr. Hammond's testimony, but a few led with Dr. Little. In the sample, eleven papers printed a story, and two placed it on page one.

July 20: Dr. Ernest L. Wynder of the Sloan-Kettering Institute for Cancer Research testified that filter cigarettes, just coming into widespread use, often carried more-potentially harmful ingredients than non-filter types. Five of the twelve sample papers carried a story, none on page one.

July 24: After a week-end recess, the Surgeon General and Dr. John R. Heller, director of the government's National Cancer Institute, hinted that "tar" in smoke might be the key to lung cancer. (The UP led with Dr. Heller's statement that nicotine was "not involved in lung cancer.") Four of twelve papers used a story.

July 25: Reports on laboratory tests of tars and nicotine by brand. These had previously been printed in *Consumer Reports* and *Reader's Digest*. Eight of the twelve papers used them, one on the front page.

July 26: A series of witnesses expressed doubts about the cancer-smoking relationship. Ten of the twelve papers printed stories—broadest coverage since the opening day.

July 27: The final day, in which the chairman of the Federal Trade Commission described efforts to restrict misleading cigarette advertising. Ten papers used a story, and two put it on page one.

In summary: The six days of hearings had produced the opportunity (in the dozen papers) for the appearance of seventy-two stories. Forty-eight appeared, an average coverage of eight papers a day. On

*The newspapers were: *The Sun* (Baltimore), *The Charlotte Observer*, *The Chicago Tribune*, *The Plain Dealer* (Cleveland), *Des Moines Register*, *Minneapolis Tribune*, *The News* (New York), *New York Herald Tribune*, *The New York Times*, *The Philadelphia Inquirer*, *Richmond Times-Dispatch*, *The Washington Post*.

† *Columbia Journalism Review*

five occasions, the hearings were placed on page one.

6 The retrial order for the lung-cancer damage suit, available October 13, 1961. Brief wire reports were followed by a drop of 4 1/2 points in Liggett & Myers stock during the previous afternoon, but only half of the sample of newspapers used any story about the case outside the market report. The UPI story bracketed the name of the manufacturer, suggesting a possible deletion. The AP did not mention the brand.

7 The Royal College report, available March 8, 1962. Only one of the papers inspected omitted the story, none placed it on page one.

These events, of varying importance, still received erratic treatment. *The Washington Post* used page one for the opening day of the hearings, then ran nothing for two days. *The Charlotte Observer* ran material on the filter-tip statistics and the government scientists, but omitted the opening and closing sessions. *The Philadelphia Inquirer* described only the first, fifth, and sixth days. Handling of the other stories appeared to be only slightly more consistent.

Certainly there is no appearance of enforced suppression here. Rather, the pattern suggests (1) a

failure to recognize possible reader interest in the stories, (2) a tendency to discount the validity (and importance) of the content, or (3) a failure to keep track of the news from day to day.

Editorial pages over the years have been largely silent. In 1957, the tobacco industry, which had declined to appear at the hearings, found defenders in such pages as those of the *New York News*: "CIGGIES ASSAILED AGAIN—HO HUM" was the title. The editorial ended: "Sure, the *News* takes cigarette advertising and likes it, and so what?" The *Denver Post* and the *Richmond Times-Dispatch* also took a dim view of the hearings.

In 1959, the *News* editorialized: "...until the scientists make up their minds one way or the other, we don't see any reason why Americans shouldn't go on calmly smoking as many cigarettes as they damn please—which is just what current figures on booming cigarette sales show Americans to be doing."

In *Editor & Publisher* for October 20, 1962, James C. Bowling of the Tobacco Institute praised the *News* for "a fine editorial stand." He also singled out the *Detroit Free Press* and the *Louisville Courier-Journal*, the latter for asking caution before "levelling a blow" at the tobacco industry.

On the opposite side a few papers have taken strong positions. *The Washington Post* has endorsed the suggestion that cigarettes carry a warning against excess use. One of the frankest statements to come from tobacco country appeared in the *Charlotte Observer*. It said that "the problem can be licked...if all the people who have a stake in it would quit beating around the bush and admit that the cancer problem exists."

One of the most widely noted was the editorial, "Cigarettes and Public Health," which appeared in *The New York Times* of April 5, 1962. It ended:

Many leading medical and public health authorities agree that the statistics demonstrate beyond a reasonable doubt that smoking of cigarettes has an injurious effect of some kind on those who indulge in the habit beyond moderation. This should be enough for public health agencies to discourage the habit by means short of prohibition.

Coverage: the magazines

Magazine coverage has been considerably more sporadic than that in newspapers. Magazines, being highly selective, can omit any subject indefinitely. To cover the cigarette-cancer controversy, a magazine had to make a positive decision to develop the story.

By a wide margin, the greatest coverage has appeared in *Reader's Digest*, *Consumer Reports*, and the major news weeklies. The *Digest* has been running an anti-smoking crusade since the 1920's, employing

Summer, 1963



*"KING-SIZE OR REGULAR?"

Rarity: Mauldin cartoon of June 19, 1963, was an exception to the scarcity of editorial comment.

polemical techniques to drive home its points. *Consumer Reports* has painstakingly investigated the content of cigarette smoke and reported new findings.

Time and *Newsweek* have covered almost every major development over the years fully and frankly. So has *Business Week*. *U.S. News and World Report* has carried several long interviews with cancer experts. *Life* has also had an impact with occasional treatments. One of the most powerful appeared on December 21, 1953. "Smoke Gets in the News" described skin-cancer experiments with mice and the threat of "tars."

The treatment beyond these magazines has been less comprehensive. *The Saturday Evening Post* has never mentioned the subject. *Redbook* ran a full exposition in mid-1960. It also criticized a competitor, *Cosmopolitan*, for allegedly altering an otherwise tough article to placate the industry. Occasional articles have appeared, too, in smaller general magazines, such as *Athletic* and *Harper's*.

Given their preoccupation with health problems and children, one would hypothesize that the women's service magazines would have found the smoking a natural subject. They have not. *The Ladies Home Journal* ran an article in 1956 and a "symposium" on stopping smoking in 1961. *Good Housekeeping* touched on delectatized cigarettes and stop-smoking drugs in 1957 and 1960, but did not discuss the central problem. *McCall's* has had only one non-scientific article.

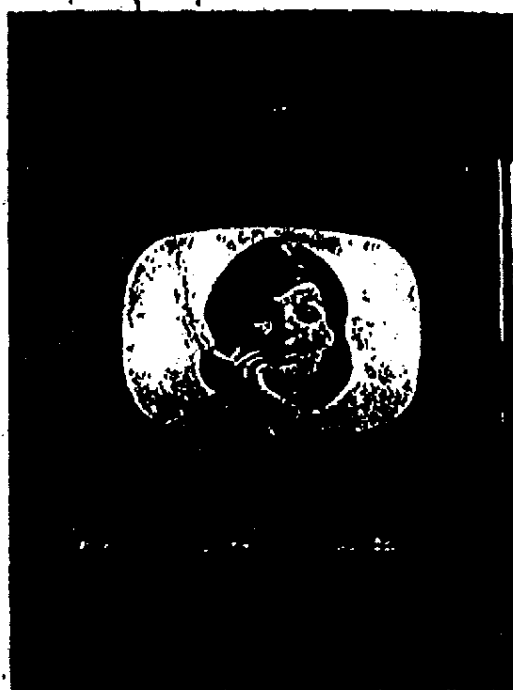
One explanation that could be offered would be that cigarette advertising held back coverage. But it is hard to make the theory fit. The weakest group, women's magazines, does not carry such advertising. *Life*, *Time*, and *Newsweek*, all of which have a considerable volume of cigarette revenue, have acquitted themselves well. The case of the general magazines is less clear. They have been under severe economic pressure; only the editors can truly tell whether this has limited their subject matter.

Coverage: broadcasting

Magazines have in some cases been deficient, but their shortcomings are less striking than those of radio and television. The cigarette issue has not been barred from the regular fifteen-minute, ten-minute, or three-minute news packages. But even more than in magazines, full treatment of the subject demands special decision and special effort—in other words, the half-hour or hour documentary program. Here is where two of the major networks have been weakest.

In reply to a letter, the American Broadcasting Company reported that it had done no documentaries on the subject and did not contemplate any.

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Dominant medium: CBS ad in 1962 described the "greatest cigarette vending machine ever devised."

Beyond news items, the only effort by the National Broadcasting Company was a set of interviews with teenagers on smoking habits on the "Update" program in May, 1962.

The Columbia Broadcasting System, by contrast, has tackled the subject in earnest. In 1955, Edward R. Murrow's "See It Now" gave the controversy its first extensive time in two half-hour programs. In April, 1962, after the issuance of the British report, the daytime "Calendar" gave it two half-hours. In September, 1962, "CBS Reports" presented "The Teen-Age Smoker," an hour-long report that stands as the most courageous and outspoken television program on the subject to date.

Despite receiving substantial time on the program, the industry fired a strong protest to the network and the press even before CBS presented the show. The industry contended that its spokesmen's filmed comments had been unfairly edited. Also before the show, the public relations firm of Hill & Knowlton, sire of the TIRO, telephoned television reviewers around the country to warn them that a protest was on its way.

The protest by the industry had more effect on newspapers than on CBS, which stoutly resisted. Be-

cause the protest made a news story of what would ordinarily have been only a television listing, a number of papers placed the protest in the news columns, but few with any review or summary of the program itself. Rumors of retaliation by cigarette advertisers came to nothing; CBS apparently emerged unscathed when the industry decided against direct retaliation.

There is little evidence that local radio and television stations have used their growing tendency to broadcast editorials to take a position on smoking. One exception is the 1,000-watt radio station WAVA in Arlington, Virginia, which made a decision to accept no more cigarette advertising and has put on the air editorials calling on other broadcasters to do likewise.

The advertising problem

Tobacco companies offer what *Business Week* has called "the classic case, studied in every business school in the country, of how a mass-production industry is built on advertising."

The importance the tobacco industry attaches to advertising has been clearly demonstrated over the years. It has ranked among the leaders in ratio of advertising cost to sales. It incurs steep expenses in introducing new brands, and innovation in brands is increasingly the key to success. In one instance—that of Oasis cigarettes in 1958—the costs amounted to nearly 65 cents for every carton sold. The average for the industry customarily runs to 6 cents a carton.

Reciprocally, advertising is important to mass media. Cigarette advertising in newspapers, magazines, and broadcasting will approach \$200,000,000 in 1963. In 1962, the expenditures were distributed as follows:

Magazines:	\$28,300,000
Newspapers:	\$16,600,000
Newspaper magazine supplements:	\$6,900,000
Television (network and spot):	\$111,700,000
Radio (estimated):	\$30,000,000
Total:	\$193,500,000

Obviously, in the competition for tobacco advertising, television has pulled far ahead. In the last six years, television's total has risen by more than \$33,000,000. In the same period, tobacco advertising has edged up somewhat in magazines and moved downward in newspapers.

Not surprisingly, television has been the focus of the steadily growing campaign to place restrictions on cigarette advertising, emulating steps already taken in Britain and in Europe. Last November, LeRoy Collins, president of the National Association of Broadcasters, created a furor by urging tighter codes to restrict what he called the "promotional im-

pact of advertising designed primarily to influence young people" to smoke. He asked "Can we ignore the fact that progressively more and more of our high school age (and lower) children are now becoming habitual cigarette smokers?"

When word of the speech reached the general press, most of the big powers in radio and television rushed to placate the tobacco industry, assuring it that Collins did not speak for the industry he is supposed to represent. ABC and NBC both issued critical statements; CBS did not comment. Many individual station managers, however, supported the former governor, and in January he was re-elected to his position.

Collins was undoubtedly inspired by the example of Britain, where tobacco companies voluntarily agreed to move television advertising to 9 p.m. or later. A look at the sponsorship of network television in the season just past reveals what revolutionary realignment any such step would mean.

There was tobacco sponsorship between 7 and 9 p.m. every night of the week (and viewing by teenagers does not fall off even after 9). If TVQ ratings are to be believed, four of the ten favorite programs for 6-to-11-year-olds had at least part tobacco sponsorship, and five of ten in the 12-to-17-year-old sample. The reason, of course, is that these same programs (the "Beverly Hillbillies," for example) were also adult favorites, and natural choices for advertisers. A meeting of the Tobacco Institute in July discussed this problem, but did not recommend specific steps, beyond affirming that cigarette advertising should not be directed specifically at youth.

Thus far, the advertising and journalism trade press has fought stoutly against any restrictions, although words of warning have begun to enter the comments. *Advertising Age* has cautioned the tobacco companies that they should start de-emphasizing athletes and youth in advertisements. And at least two advertising agencies quietly let it be known that they would handle no more cigarette accounts.

Late in June, the tobacco industry itself took a major step when five of the six big companies decided to stop advertising in college newspapers and to halt other campus promotion. The move belatedly rid the industry of a troublesome contradiction in its claims that its efforts are directed at adults. The effects on the papers were bound to be severe; cigarette companies had been their biggest advertisers.

These are indications that the advertising problem is at last being taken seriously. They are also an advance over the kind of guerilla warfare that marked the previous decade. For example:

In 1957, the American Tobacco Company (as reported in *The New York Times*) requested Batten,

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Barton, Durstine & Osborn to stop handling the *Reader's Digest* account. The agency stopped. The *Digest* was spending about \$1,300,000 a year. American, \$22,000,000.)

Makers of smoking deterrents and smoking substitutes have encountered considerable difficulty in getting their ads placed. Bantob Products Corporation, maker of Vanguard vegetable "smokes," filed suit in 1959 against the big five tobacco companies, claiming that they had forced newspapers, radio, and television to reject Vanguard ads. Acknowledgment of the industry's role came in an editorial in *Tobacco Leaf*, a trade publication. It said in part: "The most effective weapon against invaders, (of this kind) is economic pressure, and we believe that it should be used in whatever legal manner the industry deems necessary for its own preservation." The makers of Bantob, a deterrent tablet, and Aquafilter, a cigarette holder, voiced similar complaints.

The early months of 1963 were notable for two developments in this field—first, new attempts to legislate against cigarette advertising; second, the actions of state medical societies, which have hitherto

The Words Get Stronger Heart Association Smoking Warning

"The relationship between cigarette smoking and coronary artery disease should be brought

Mounting campaign: *Harold Tribune*, June 4

remained silent or noncommittal. Both of these are symptoms of the kind of impatience that was expressed in a publication that is hardly an enemy of business, the *National Review*. The attempt of the tobacco industry in this and other countries to hide, obscure, or distort this fact (of the correlation between smoking and lung cancer), in spite of its continuing reconfirmation by one after another inquiry, is becoming an intolerable fraud on the public."

For broadcasting, magazines, and newspapers, the lesson is obvious: As in the past, when legislation has restricted medical and securities advertising, there is now a strong possibility that government will set limits that could have been drawn by the media themselves. The months until the Surgeon General's report will be worth watching closely, for they will contain a race between legislators and advertisers, between self-government and outside regulation.

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Conclusions

Differing markedly in methods and traditions, the news and information media of the United States have treated the smoking-and-health issue in ways ranging from courageous and outspoken to indifferent or timid. The spectrum can be arranged as follows:

1. Magazines of fact have offered the most thorough and well-organized presentations of all media, although less frequently than the newspapers. Magazines also include an unusual example of over-coverage—the propaganda campaign by the *Reader's Digest*. As noted before, women's magazines and some of the general-interest magazines have done little to clarify the issue.

2. Newspapers have presented satisfactory coverage in the aggregate, but have left the story so fragmented as to create possible confusion. In contrast to innumerable serifs done on other questions of public health, few newspapers have undertaken projects for presenting the evidence.

3. Broadcasting: Routine news coverage has been equivalent in character to coverage of other subjects. Opportunities for full documentary presentations have been bypassed, except by CBS.

To the questions posed at the beginning of this article, the answers would appear to be:

1. Coverage has been sufficiently fragmented, uneven and affected by publicity efforts on both sides to cause confusion. An important place for clarifying confusing news—the editorial page—has been little used. Only a few individual organizations have come close to giving the issue the kind of in-depth accounting that would seem to be owed the public. Here journalism has failed to assume the kind of initiative that it has shown in many other issues of public health.

2. Similarly, journalism organizations have assumed little initiative on the question of tobacco advertising. Both the tobacco industry and governmental bodies have moved more swiftly toward restriction than have the institutions of journalism, which have largely adopted a "wait-and-see" attitude.

3. Suppression of news of the controversy for advertising's sake, if present at all in the printed media, has certainly played a role secondary to other factors. It should be noted, however, that two of the three television networks have clearly avoided giving offense.

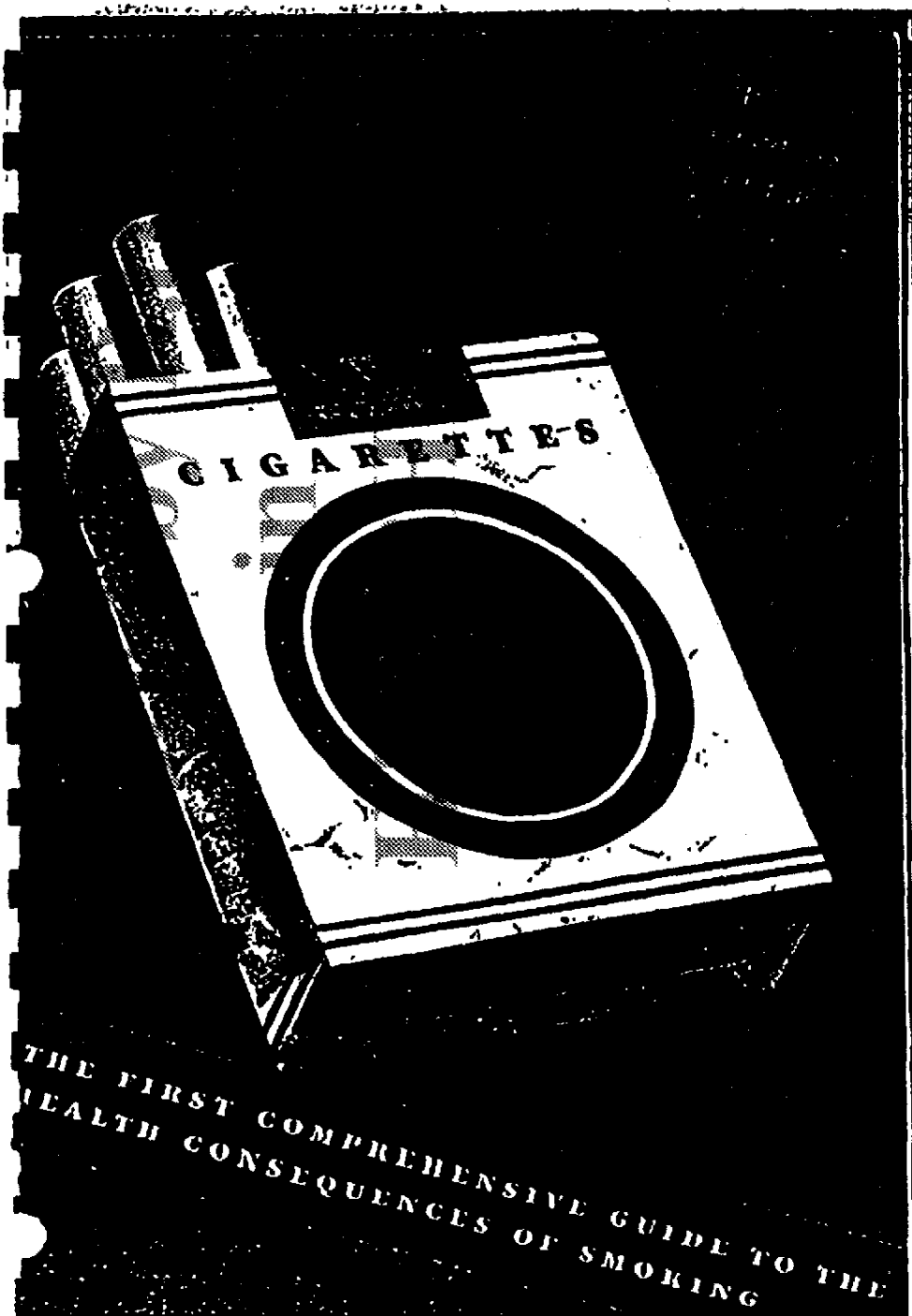
The record, of course, is still far from complete. The Surgeon General's report may help to clarify the problem somewhat, but it will certainly not end it. Instead, journalism can look forward to a period in which the controversy to date will seem mild in retrospect. This period will be an even more stringent test for all branches of American journalism.

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**CIGARETTES:
WHAT THE WARNING LABEL
DOESN'T TELL YOU**

*The First Comprehensive Guide
to the Health Consequences of Smoking*

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AMERICAN COUNCIL ON SCIENCE AND HEALTH

Produced in
in

CAUTION

CIGARETTES: WHAT THE WARNING LABEL DOESN'T TELL YOU.

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FOREWORD

Cigarettes: The Undisclosed Medical Risks

As popular (and deadly) as they are today, cigarettes weren't even viable commercial products in the United States until about 1915. Up to that time, tobacco had commonly been smoked in pipes or cigars or had been used in its smokeless forms. Tobacco in those forms presented real health hazards, but it became uniquely dangerous to health as cigarettes emerged.

The cigarette—along with its critical accompaniment, the portable, easy-to-light match, also a product of this century—offered two notable “advantages” over other tobacco products. First, the cigarette allowed tobacco and its associated chemicals and fibers to be inhaled easily. Second, it provided the opportunity for a “quick smoke” anytime and anywhere, as opposed, for example, to the ritual after-dinner smoking of a cigar or a pipe, lit from a candle or a taper held to the fire.

Disturbing medical reports—particularly a startling increase in lung cancer, until then a relatively rare disease—began to abound in the 1930s. The reports increased in the 1940s. By the early 1950s the “real” proof of cigarettes’ contribution to lung cancer and heart disease risk was there. The public and private “controversy” about whether or not cigarettes were a hazard to health ended officially in 1964 with the release of the first United States Surgeon General’s report.¹

After the appearance of the Surgeon General’s report, national public opinion polls confirmed that the overwhelming majority of Americans said that they knew cigarette smoking was “dangerous.” Following the placement of a federally mandated health “warning” label on cigarette packs in 1966 and on cigarette advertisements in 1969, the evolving popular wisdom became, “Everyone knows the health hazards of smoking, and smokers know the risks they’re assuming—see, it’s right here on the label.”

This popular wisdom has now become the mantra of those who oppose litigation against cigarette companies. It serves as a guiding principle for the people who reject calls for more responsible action on the part of the cigarette industry and for more government oversight of the industry’s business practices.

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FROM THE

CIGARETTES WHAT THE WARNING LABEL DOESN'T TELL YOU

In this book the American Council on Science and Health (ACSH) directly challenges this widely held bit of popular wisdom. ACSH believes that in 1996 Americans—smokers and nonsmokers alike—have only the most cursory understanding of the extent and magnitude of the health risks associated with cigarette smoking as compared with other alleged health risks in the environment.

Normally, when products are marketed in the United States, their manufacturers are legally responsible for keeping abreast of the latest scientific and medical data concerning the safety of those products. Tort law requires manufacturers to keep consumers fully informed about real or potential health risks associated with their products. A manufacturer who detects a defect that might harm consumers—a defect in, say, an automobile, a lawnmower or a baby carriage—has an economic incentive to notify customers—even to recall a product—if the manufacturer suspects a hazard exists or identifies a new hazard. The incentive to warn consumers is provided by the ever-present threat of future litigation against the manufacturer by a consumer who suffers harm from the product. This threat of litigation is a strong motivator to keep manufacturers up to date and forthcoming on the medical risks, if any, of their products.

Cigarette manufacturers enjoy a unique legal status, however, and so have no such incentive to report risks. When the United States Congress mandated the so-called "Surgeon General's Warning Label" on cigarette packs and advertisements, it simultaneously excused the tobacco industry from any obligation to warn consumers in detail about the dangers of those products. Congress in effect "preempted" the responsibility of the cigarette manufacturers to provide a detailed warning.

Smokers and would-be smokers in the years from 1964 to the present might have known in the rhetorical sense that smoking was "dangerous"; but they did not—and still do not—have some essential pieces of information that would allow them to make a truly informed decision whether or not to smoke. *This information should have been provided by the industry but never was.* Although many people take up smoking, because they find an allure in the self-destruction it offers, this behavior does not excuse the cigarette industry from its ethical responsibility to give consumers adequate information about the full range and magnitude of smoking's risks.

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To be truly informed, a consumer needs the answers to a number of basic questions:

1. "What is the safe level of cigarette smoking?" or, to put it another way, "What is the upper limit of the number of cigarettes I can smoke before I begin to incur health risks?"

What the scientific literature says

It is difficult at this point to identify a "no-hazard" level of smoking. As will be clear from the pages that follow, transient physiological effects of smoking, particularly on the cardiovascular system, are identifiable after one cigarette. While it is possible that smoking just a few cigarettes a day might not present a significant health risk to most people, there are relatively few smokers who limit their smoking that much. The vast majority of current smokers smoke more than 15 cigarettes a day²—clearly a level that dramatically increases the risk of many diseases.

What the cigarette industry and the Congressionally mandated warning label disclose to consumers

Neither the industry nor the warning label has ever warned consumers that smoking is exceptionally addictive or has pointed out the minimum amount of smoking that poses health hazards. In comparison, the manufacturers of alcoholic beverages and the government, through various publications on the health effects of alcohol, have for decades called for "moderation" in the consumption of alcohol. Further, both industry and government have defined (with some variation) what moderation is: It is in the range of from one to three ounces of 80-proof alcohol or its equivalent in wine or beer.

2. "What specifically are the potential health hazards associated with cigarette smoking?"

What the scientific literature says

As this book details, cigarette smoking is known to adversely affect nearly every system and function of the human body. Cigarette smoking causes malignancies and adverse effects on organs that have no direct contact

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with the smoke itself. It increases the risk of cancers of the pancreas, the bladder, the colon and the cervix. It is also a causative factor in male impotence, infertility, blindness, hearing loss and bone loss.

What the industry and the label disclose:

As recently as 1994, when the chief executive officers of the major cigarette manufacturers testified before Congress, the industry has denied knowledge of any health risks associated with cigarette smoking.

The various rotating, mandated warning labels note an increased risk of cancer, heart disease and various lung diseases as well as "complications" in pregnancy. The details of the risks—including the sites at which cancer risk is increased and the other common health consequences of smoking that go beyond cancer, heart disease and lung disease—have never been presented by the industry. Neither have they been disclosed on the mandated labels.

By way of contrast, take a look at any of the many multipage advertisements for prescription drugs that appear almost weekly in such consumer magazines as *TV Guide* and *Parade*. The first page of such an ad is usually a glossy encomium for the product, laid out in a style familiar to readers of over-the-counter drug and cosmetic ads. But turn the page and you find a detailed list in tiny print of contraindications, precautions and specifics of "what could go wrong," including unlikely hazards. It's a far cry from the discreetly unobtrusive Surgeon General's warnings, which have come to be regarded as merely another bit of visual "snow." Readers have learned to ignore these minimally intrusive little boxes just as they've learned to ignore the UPC-code boxes snuggled into the corners of their favorite magazines' covers.

5. "What is the relative magnitude of the various risks associated with smoking cigarettes?"

We live in an age of warning labels. The artificial sweetener saccharin carries a label warning that it causes cancer in laboratory animals. Cups of fast-food coffee warn us that the liquid is hot and could cause a burn. The media tell us about the alleged "carcinogen of the week"—Alar on apples, nitrite in bacon. Everything seems to cause cancer or

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otherwise threaten our health. Where do cigarettes fit into the scheme of dangerous things?

What the scientific literature says

Cigarette smoking is by far the leading cause of preventable death in the United States. It is responsible for approximately 500,000 deaths each year.³ About one death in four—one death in two designated as "premature"—is attributable to smoking. A recent study concluded that even among people admitted for inpatient treatment of alcoholism and other non-nicotine drug dependencies, tobacco-related causes of death are significantly more frequent than alcohol-related causes.⁴

The concept of "risk" is a tricky one for consumers. The risk of drinking apple juice prepared from Alar-exposed apples is purely hypothetical. We have no studies of humans that suggest such a risk exists. But we do have an overwhelming number of studies that indicate that pack-a-day smokers, when compared with people who have never smoked, have 10 times the risk of lung cancer and twice the risk of heart disease. (Although smoking increases the risk of death from lung cancer more dramatically than it increases the risk of death from coronary heart disease, smokers in the United States die from coronary heart disease slightly more often than they do from lung cancer.⁵ A doubling of the risk of death from coronary heart disease, a common cause of death among nonsmokers, yields a slightly higher number than does a tenfold increase in lung cancer, a relatively rare disease among nonsmokers.)

What the industry and the label disclose

Cigarette companies and the Congressionally mandated label have never defined the extent of the risks assumed by smoking, nor have they contrasted those risks with the everyday risks of life, such as crossing a busy street.

4 "Are the risks of smoking reversible, and if so, at what age?"

What the scientific literature says

Many, if not most, smokers assume that they will eventually give up the habit. They also assume that when they do, their health-risk profile will return to normal.

CIGARETTES: WHAT THE WARNING LABEL DOESN'T TELL YOU

While quitting smoking brings substantial health benefits at any age, the literature points to "threshold" amounts of smoking that produce irreversible increases in risk for some diseases. Quitting can prevent the risk from increasing further, but the prior cumulative exposure can have permanent consequences. For example, two 1994 reports in the *Journal of the National Cancer Institute* indicate that for both men and women, smoking a pack a day for 10 to 14 years appears to double irreversibly the risk of developing colon cancer decades later.^{6,7}

What the industry and the label disclose:

Neither has ever provided any information to consumers about the timing and nature of the irreversible health risks of cigarette smoking.

5. "Considering the adverse health effects of smoking, is there a way I might monitor my health to detect any possible damage earlier rather than later?"

What the scientific literature says:

Screening for early detection of a number of diseases—such as cervical cancer—for which smoking is a risk factor is advisable for smokers and nonsmokers alike. There are, however, also some early-detection checks that may be advisable for smokers that may not be necessary for nonsmokers. For example, in 1989 the U.S. Preventive Services Task Force did not recommend routine screening for peripheral arterial disease (PAD) in asymptomatic persons, but the task force noted that clinicians should be alert to signs of PAD in persons at increased risk—such as smokers. And while the task force did not recommend routine electrocardiography in asymptomatic persons for reducing the risk of coronary artery disease, it noted that screening electrocardiography may be clinically prudent for asymptomatic males over age 40 with two or more cardiac risk factors—of which one might be smoking.⁸

What the industry and the label disclose

Neither the industry nor the mandated label has ever warned cigarette smokers to monitor their health for early and perhaps reversible signs of cigarette-related illness. In contrast, a number of prescription drugs now on the market, while deemed "safe" and effective for use, carry warnings

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of potential undesirable health consequences—such as damage to the liver—and recommendations for surveillance—such as regular liver-function tests—to assess the drugs' impact.

6. "Do cigarettes interact adversely with other products to intensify the negative health risks?"

Recently, manufacturers of over-the-counter pain killers have suggested that consumers who enjoy more than three or four alcoholic drinks a day might want to discuss with their doctors their use of the pain killers. These suggestions are based on concerns about a "synergism" of the pain killers and the alcohol—a combined action with a total effect greater than that of either the pain killers or the alcohol when taken alone. Such an interaction could cause problems that might not occur if only one of the products were used.

What the scientific literature says

It has been clear for decades that there is an enormous negative synergism between cigarette smoking and the consumption of alcoholic beverages. For example, smokers who regularly consume alcoholic beverages have a truly spectacular increased probability of developing esophageal cancer. If these consumers smoked but didn't drink, or drank but didn't smoke, their risk of cancer at that particular site would be substantially reduced.⁹

What the industry and the label disclose

Neither the industry nor the mandated warning label has ever disclosed the enormous synergistic effect alcohol consumption has on esophageal cancer among cigarette smokers.

7. "Have there been any new risks of smoking identified since the Surgeon General's report in 1964?"

What the scientific literature says

There are over 70,000 medical articles detailing the dangers of smoking. As this book notes, new findings since 1964 have implicated cigarette smoking as a causal factor in a wide range of ailments. Even during the

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1990s new causal information has continued to be identified; researchers at the National Cancer Institute have identified cigarette smoking as a causal factor in colon cancer, for example. *

What the industry and the label disclose:

There has never been an attempt on the part of either the industry or the Congress to keep consumers apprised of the growing list of diseases causally associated with cigarette smoking.

8. "Is there any other information I should have that will allow me to be an informed consumer when I decide whether or not to start or continue smoking?"

What the scientific literature says:

The United States Surgeon General has determined that cigarette smoking is addictive and that the pharmacological and behavioral processes that determine tobacco addiction are similar to those that determine addiction to other drugs, such as heroin and cocaine. Nicotine is the psychoactive drug in tobacco that reinforces its continued use. According to a study published in the *Journal of the American Medical Association*, cocaine addicts in treatment tended to find cigarettes harder to give up than cocaine.¹⁰

What the industry and the label disclose

The industry has long denied that either cigarette smoking or nicotine is addictive and has effectively opposed any attempt to include that information on the mandated label

In recent years there has been an increase in the volume of the public debate and an increase in the controversy over what can be done, within a free society, to reduce the burden of cigarette-related disease and death. The American Council on Science and Health and other advocacy groups have long taken an aggressive and unwavering position on the dangers of smoking. Critics have dismissed antismoking groups as "health Nazis" and "health nannies"—repressive killjoys who want to control how people live and deny them their basic "freedom" to smoke

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ACSH enthusiastically promotes an individual's freedom to make lifestyle choices. But freedom is only achievable when the choice is truly informed, and ACSH believes that as we approach the 21st century, the decision to start smoking is rarely a truly informed one. Three thousand children under the age of 18 take up smoking every day.¹¹ Considering the powerful pharmacological and behavioral factors influencing smoking addiction, the claim that smokers are celebrants of individual freedom should be treated with skepticism.

If indeed "the truth will make us free," perhaps the following 20 chapters of full disclosure of the medical effects of smoking will serve as the first milestones along the road toward true freedom of choice. ACSH scientists have prepared this relatively brief volume to increase public knowledge of the health risks of smoking. But having begun the process, we would like to return the responsibility to those to whom it properly belongs: the manufacturers of cigarettes.

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President

American Council on Science and Health

New York, New York

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